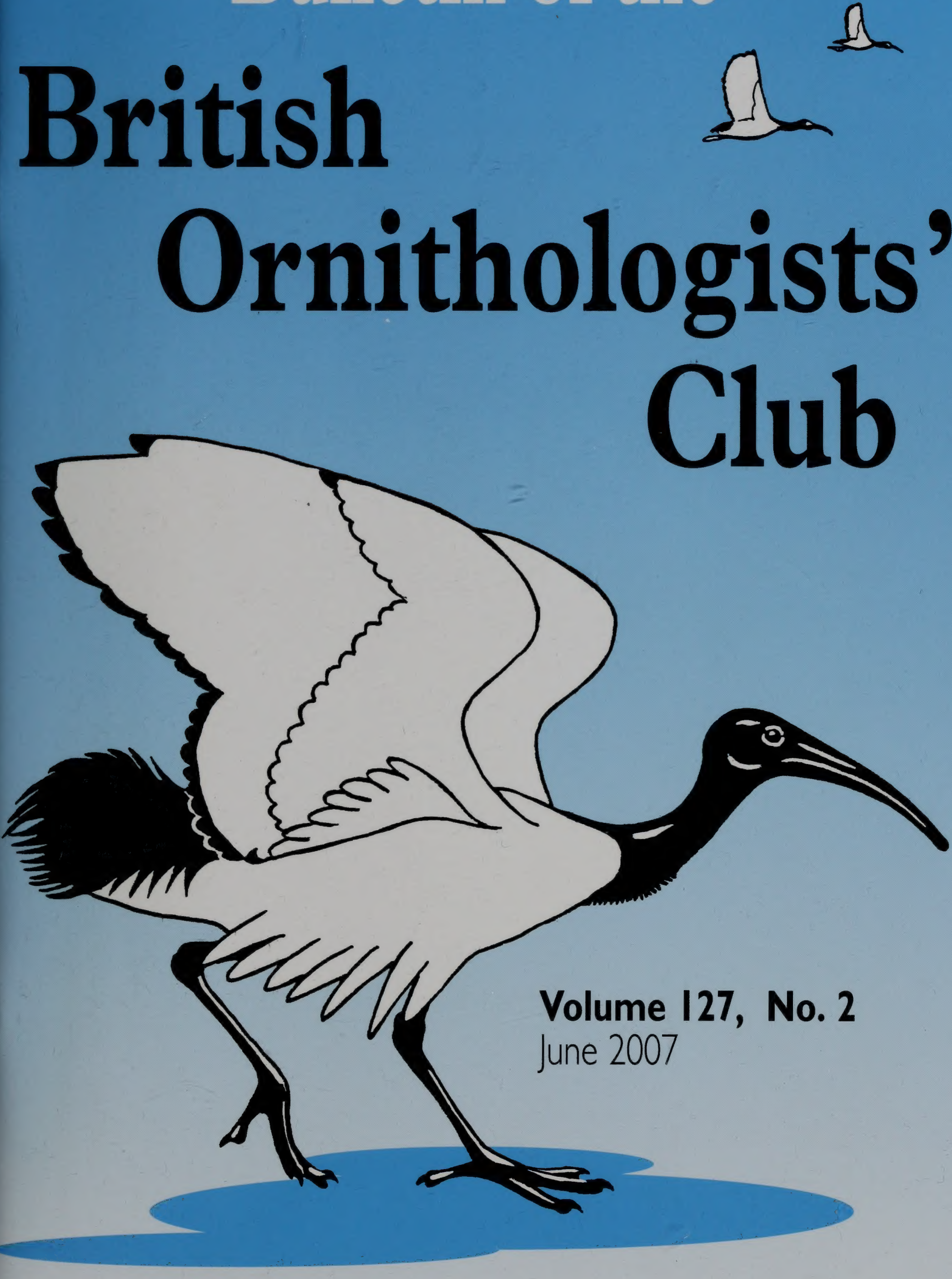
Bulletin of the British Ornithologists' Club



Volume 127, No. 2
June 2007

MEETINGS are normally held in the **Sherfield Building** of **Imperial College**, South Kensington, London SW7. The nearest Tube station is at South Kensington; a map of the area will be sent to members, on request. (Limited car parking facilities can be reserved [at a special reduced charge of **£5**], on prior application to the Hon. Secretary.)

The cash bar is open from **6.15 pm**, and a buffet supper, of two courses followed by coffee, is served at **7 pm.** (A vegetarian menu can be arranged if ordered at the time of booking.) Informal talks are given on completion, commencing at about 8 pm.

Dinner charges are **£22.50** per person (since 1 January 2007).

FORTHCOMING MEETINGS

See also BOC website: **http://www.boc-online.org**

10 July 2007—Prof. C. M. Perrins (President, British Ornithologists' Union)—*Swan upping.*
*Applications to Hon. Secretary (address below) by **26 June***

25 September 2007—Lord Cranbrook—*Swiftlets.*
*Applications to Hon. Secretary (address below) by **11 September***

6 November 2007—David Fisher—*Birds of Australia.*
*Applications to Hon. Secretary (address below) by **23 October***

Overseas Members visiting Britain are especially welcome at these meetings, and the *Hon. Secretary* would be very pleased to hear from anyone who can offer to talk to the Club, giving as much advance notice as possible—please contact: S. A. H. (Tony) Statham, Ashlyns Lodge, Chesham Road, Berkhamsted, Herts. HP4 2ST, UK. Tel. +44 (0) 1 442 876 995 (or e-mail: boc.sec@bou.org.uk).

Bulletin of the
BRITISH ORNITHOLOGISTS' CLUB

Vol. 127 No. 2 Published 12 June 2007

CLUB ANNOUNCEMENTS

The Hon. Secretary thanks all those who returned the dinner meeting questionnaire and for any additional comments offered. The Committee is reviewing these responses and hopes to structure future meetings (from 2008) in line with the majority views of those who replied.

Members are reminded that annual subscriptions for 2007 were due on 1 January at the revised rate of £20 regardless of whether members also belong to the British Ornithologists' Union. Members are also respectfully reminded that dinner meeting charges were increased to £22.50 per head from 1 January 2007.

The Committee welcomes the following new members who have joined the Club in the past six months: Dr Walter Bock (USA), Mr Alenus Chantal (Belgium), Mr S. Eckert (Germany), Mr N. Frenz (Germany), Mr Kenneth J. Harte (USA), Ms Alexandra Hayes (UK), Mr Victor J. Hernández (Spain), Mr Robin Restall (Venezuela), Ms Susan Myers (Australia) and Ms Vicky Sun (Taiwan).

Committee is pleased to announce the formation of an Editorial Board to assist the *Hon. Editor* and Bulletin Subcommittee (BSC) in maintaining the high standard of the Bulletin. The initial membership of the board reflects a wide spread of interests and geographical scope, but they have been selected for their expertise in the core subjects of the Bulletin, taxonomy and nomenclature, and distributional data. The board's members are: Murray Bruce (Australia), R. T. Chesser (USA), Edward C. Dickinson (UK), Françoise Dowsett-Lemaire (France), Steven M. S. Gregory (UK), José Fernando Pacheco (Brazil), Robert B. Payne (USA), Pamela C. Rasmussen (USA), C. S. (Kees) Roselaar (the Netherlands), Thomas S. Schulenberg (USA) and Lars Svensson (Sweden).

The 943rd meeting of the Club was held on Tuesday 13th March 2007, in the Sherfield Building Annexe, Imperial College, London. Fifteen members and eight guests were present.

Members attending were: Cdr. M. B. Casement (*Chairman*), Miss H. Baker, Ms D. V. Breese, J. E. Francis, F. M. Gauntlett, D. Griffin, G. P. Jackson, Dr C. F. Mann, D. J. Montier, Mrs M. N. Muller, P. J. Oliver, Dr R. P. Prŷs-Jones, P. J. Sellar, S. A. H. Statham and C. W. R. Storey.

Guests attending were: M. de L. Brooke (*Speaker*), Mrs C. R. Casement, P. Donald (*Speaker*), Mrs M. H. Gauntlett, Mrs M. Montier, C. A. Muller and Ms F. Roberts.

After dinner, Paul Donald gave a talk based on the paper he and Michael Brooke had published in *British Birds*, *The Raso Lark: the natural history of an unlikely survivor*. Described in 1897, Raso Lark *Alauda razae* is confined to the barren 7 km^2 island of Raso in the Cape Verdes off West Africa. Looking and behaving like a small, greyer Skylark *A. arvensis* from which it may have diverged 2–3 MYA, the species has never numbered more than *c*.250 individuals since its description. Whether it was more common in the past, when its range possibly extended to neighbouring Branco, Santa Luzia and São Vicente is unknown. Suffice to say that, in the last five years, when the population has varied between 65 and 140, the Raso Lark has been one of the rarest birds in the world, classified as Critically Endangered. Breeding is apparently triggered by rainfall and it is thus worrying that the last 35 years have seen precipitation below the long-term average in the Sahel zone (including the Cape Verdes). Raso Larks exhibit striking sexual dimorphism, there being virtually no overlap between the bill and wings of the larger males and smaller females. The larger size of males probably explains why they spend more time than females engaging in an activity characteristic of the species, digging for *Cyperus* bulbs, which are an important source of food and water. Females also dig but less frequently, perhaps because their digging bouts are more frequently interrupted by larger males. Possibly as a consequence, evidence is accumulating that male Raso Lark survival is greater than that of females. This contributes to a remarkably unbalanced sex ratio, at present *c.*2.3 males per female. As the Raso Lark population can never become large on Raso, there is a case for endeavouring to establish it on another island, probably Santa Luzia. An experimental translocation of a small number of males, whose preponderance on Raso means they are 'redundant' to the population, would be a useful first step.

CORRIGENDUM

Due to an unfortunate last-minute error at the printing house, the following caption was omitted from *Bull. Brit. Orn. Cl.* 127: 43. Figure 6. Mexican *Chlorospingus* species depicted. Upper left: *C. dwighti*, from northern Central America; upper right: *C. postocularis*, from south-eastern Chiapas (Mexico) and southern Guatemala; centre: *C. ophthalmicus*, from the Sierra Madre Oriental (Mexico); lower left: *C. wetmorei*, from the Sierra de los Tuxtlas (Mexico); and lower right: *C. albifrons*, from the Sierra Madre del Sur (Mexico). From an original mixed painting by Marco Antonio Pineda-Maldonado.—THE EDITOR.

ANNUAL GENERAL MEETING 2007

1. The Annual General Meeting of the British Ornithologists' Club was held in the Sherfield Building, Imperial College, London, SW7, on Tuesday 24 April 2007 at 6 pm with Cdr. M. B. Casement OBE, RN, in the Chair. Fifteen members were present (including seven from the committee). Apologies were received from: I. R. Bishop, Dr J. H. Cooper, S. P. Dudley and Revd. T. W. Gladwin. The Minutes of the 2006 Annual General Meeting held on 25 April 2006, which had been published (*Bull. Brit. Orn. Cl.* 126: 83–85), were approved and signed by the Chairman.

2. Chairman's report. This is my second report as your Chairman but, as last year, I propose to be brief because most of the points are already shown in the Trustees' Annual Report and will be covered in more detail by David Montier and Tony Statham, under the appropriate items to follow. Two other key people cannot be with us today: Guy Kirwan (*Hon. Editor*) is abroad and Tom Gladwin (*Chairman JPC*) is making a good recovery from his hip operation. My thanks are due to them and to Tony Statham for their key roles in managing our affairs. Sadly, your Committee says goodbye to Chris Storey and Iain Bishop, on completion of their four-year terms of office; we thank them both for their time and expertise, and especially to Iain Bishop for his continuing advice, despite his lengthy recuperation from a surgery operation last year.

Behind the scenes, our thanks are due to Steve Dudley who now manages membership and subscriptions, and the management of the website. With effect from January 2007, separate subscription rates for BOU and non-BOU members were abandoned; all now pay £20 per year. The steady and continuing small decline in membership remains a matter of concern, but is similar to other societies.

As you will see, our financial affairs are very healthy, largely thanks to the expert management of our Hon. Treasurer and our Trustees, and a welcome rise in the stock market. We again held seven evening meetings, on a wide range of subjects, and a similar programme of six meetings is planned for 2007. Our thanks are due to Imperial College for their excellent administrative support and, despite the annual rise in dinner charges, for continuing to allow us very favourable rates. The Club's projector has been put to good use during the year, and we are grateful to Pat Sellar and Ron Kettle for their technical skills with the sound equipment.

The BOC–BOU Joint Publications Committee (JPC), under the chairmanship of Tom Gladwin has made good progress, with the publication of the *The birds of São Tomé & Príncipe with Annobón,* in

2006, and two more in the *Checklist* series are set to appear in 2007. We are grateful to Bob Cheke for his contribution as Commissioning Editor of publications in the *Checklist* series.

As announced last year, the Bulletin Subcommittee (BSC) was established under the chairmanship of Prof. Chris Feare, to provide support and advice to the Editor, and they formally met last May. This resulted in a long list of options and recommendations, which have been studied and discussed in Committee. Under the editorship of Guy Kirwan, the Bulletin has maintained its usual high standard. As recommended by the BSC, printing has been transferred from Crowes of Norwich to Latimer Trend, and the first issue, Vol. 127(1), was published in March. In January, we formally thanked Mary Muller for her 17 years service as Bulletin indexer, and this task is now done by Eng-Li Green, of Alcedo Publishing.

Throughout the past 12 months, your Committee has been actively looking at the 'Vision for the Future', including recommendations from the BSC on a wide range of publishing options for the Bulletin. The culmination of this study was a special meeting, together with a number of other advisors, at Tring on 15 February, during which several important decisions were made, and I shall briefly present the main conclusions of this study, after dinner. I am delighted to report that, following the resignation of Chris Feare, Nigel Collar has agreed to chair the BSC.

3. Trustees' Annual Report. The Chairman advised the meeting that the Trustees' Annual Report and Annual Accounts were again combined in the handout available to those attending the meeting and confirmed that these would also be published in the June issue of the Bulletin. The Hon. Treasurer drew attention to the income and expenditure details shown on p.93 of the accounts and summarised the balance sheet shown on p.92. The Chairman thanked the Hon. Treasurer for his support and seconded his proposal that the accounts be formally accepted; all those present agreed.

4. The Bulletin. In the absence of the *Hon. Editor*, the *Hon. Secretary* referred to his report published in the Trustees' Annual Report, which read as follows: 'Vol. 126 comprised 324 pages and 36 papers of broad geographical spread. Three new taxa were described, all from the Neotropics, namely new subspecies of *Caprimulgus* nightjar, *Coeligena* hummingbird and *Atlapetes* brush-finch. Taxonomy and nomenclature were again well represented, the latter including a particularly important contribution on new avian names introduced in Darwin's classic work, *The zoology of the HMS Beagle*. Furthermore, a 64-page supplement, the proceedings of the Recent Avian Extinctions conference held in 2004, was also published, to coincide with the June issue. For papers published in 2006 (excluding those published in the supplement), the interval between receipt and publication was 5–26 months, with a mean of *c.*12 months, a figure, which would have been two months lower but for the very late receipt of three manuscripts following author revision. The Bulletin received a total of 55 new manuscripts in 2006 and there appears to be a trend towards longer manuscripts being submitted. Of the total, 13 were rejected, and the remainder have been accepted or are still being refereed. Grateful thanks are due, as always, to referees who have given freely of their time and expertise, to Eng-Li Green, of Alcedo Publishing, and Mike Dawson and team, of Crowes (printers), for their support and efficiency. Mary Muller produced the index, Tony Statham the cover information and Club Announcements, and staff at the Natural History Museum, Tring, offered much-valued support to the *Hon. Editor*. Special thanks are given to Mary Muller for her 17 years of compiling the index, a post from which she will retire after completing the 2006 index.'

5. Publications report. In the absence of the Chairman of the BOU–BOC Joint Publications Committee, the *Hon. Secretary* referred to his report published in the Trustees' Annual Report, which read as follows: **The Committee.** This joint committee (JPC), which now conducts most of its business by e-mail, met once in 2006. The Chairman of the committee is alternately appointed by the BOC and BOU. Nominated by the BOC, Tom Gladwin continues to chair the committee until April 2007. **Publications.** The proceedings of the conference on Recent Avian Extinctions were published in June as a Supplement to *Bull. Brit. Orn. Cl.* 126. The checklist *The birds of São Tomé & Príncipe with Annobón* was also published in 2006. Checklists on *The birds of Borneo* and *The birds of Barbados* are on schedule for publication in 2007. The manuscript of *The status of birds in Britain and Ireland*, planned for publication in the spring of 2008 as part of the BOU's 150th anniversary celebrations, is expected by late summer

2007. **Acknowledgements.** The Committee is grateful to all who have contributed to its work and especially to Bob Cheke as Commissioning Editor, and Steve Dudley for progressing and managing the titles in its charge.

6. Election of Officers and Committee. The Chairman said that the election of Officers was as proposed in the agenda as published in *Bull. Brit. Orn. Cl.* 127.1:

Mr S. A. H. Statham be re-elected as *Hon. Secretary.*

Mr D. J. Montier be re-elected as *Hon. Treasurer.*

Two appointments to committee to be made (*vice* I. R. Bishop, OBE, and C. W. R. Storey) from the following nominations: Dr R. P. Prŷs-Jones and D. J. Fisher.

No other changes to the committee were proposed, as all other members are eligible to serve at least one more year in office. All changes were proposed by the Chairman and seconded by Mrs M. N. Muller.

The following *ex-officio members* were confirmed in continuation:

Revd. T. W. Gladwin (*Chairman Joint Publications Committee*)

Prof. R.A. Cheke (*Hon. Publications Officer*)

S. P. Dudley (*Hon. Website manager*)

G. M. Kirwan (*Hon. Editor*)

7. Any Other Business. There was no other business and the meeting closed at 6.29 pm.

BRITISH ORNITHOLOGISTS' CLUB
Founded 5 October 1892
Registered Charity No. 279583

TRUSTEES' ANNUAL REPORT FOR 2006

List of Trustees—Committee

Cdr. M. B. CASEMENT, OBE, RN *Chairman* (2005)
Miss H. BAKER *Vice-Chairman* (2005)
S. A. H. STATHAM *Hon. Secretary* (2004)
D. J. MONTIER *Hon. Treasurer* (1997)
I. R. BISHOP, OBE (2003)
Dr J. H. COOPER (2005)
Dr J. P. HUME (2004)
C. W. R. STOREY (2003)
P. J. WILKINSON (2005)

Correspondence and enquiries to the *Hon. Secretary*, Ashlyns Lodge, Chesham Road, Berkhamsted, Herts. HP4 2ST
Hon. Editor G. M. Kirwan
Auditors and Independent Examiners Porritt Rainey, 9 Pembroke Road, Sevenoaks, Kent TN13 1XR
Bankers Barclays Bank plc, Dale House, Wavertree Boulevard, Liverpool L7 9PQ

Constitution

The British Ornithologists' Club was founded in October 1892. It currently operates under Rules revised in 2000 and approved at a Special General Meeting on 31 October of that year. Members of the Committee, who are also the Trustees of the Club, are listed above with the dates of their appointment. Committee members are elected for a term of four years, with the exception of the *Hon. Secretary* and *Hon. Treasurer*, who are both subject to re-election at each Annual General Meeting.

Objects of the Charity

The promotion of scientific discussion between Members of the British Ornithologists' Union (BOU) and others interested in ornithology, and to facilitate the dissemination of scientific information concerned with ornithology, with a particular emphasis on avian systematics, taxonomy and distribution. These objects are pursued through the Club's publications, especially the Bulletin, published four times a year, and a regular programme of meetings.

The Committee

The Committee met six times during the year. Mr S. A. H. Statham was re-elected as *Hon. Secretary* and Mr D. J. Montier was re-elected *Hon. Treasurer* at the AGM on 25 April, but no other changes to the Committee were proposed nor made as all other members were eligible to serve at least one more year in office. The Committee embarked on a major review of the long-term objectives for the BOC and a Bulletin Subcommittee (BSC) was established under the chairmanship of Prof. C. J. Feare, with terms of reference to develop and recommend policies for all aspects of the management of the Bulletin. Membership of the BSC comprised Dr R. J. Dowsett, Mr S. P. Dudley, Mr G. M. Kirwan (*Hon. Editor*) and Dr D. R. Wells. Following their first meeting, held on 3 May, a list of BSC recommendations was produced and the Committee is actively pursuing discussions on these.

Mr S. P. Dudley, the BOU Administrator, continued his ex-officio roles as Membership Secretary and Hon. Website Manager which form part of the work of the BOC Office under the terms of an agreement between the Club and the BOU established in 2004 (other duties include management of BOC publications, subscription management of BOC Institutional Subscribers to the Bulletin and other Bulletin-related items including servicing the newly established BSC). Revd. T. W. Gladwin remained Chairman of the Joint Publications Committee and Prof. R. A. Cheke remained Hon. Publications Officer. Mr S. M. S. Gregory, with assistance from Dr P. G. W. Salaman, continued to progress the project for the electronic archiving and marketing of the complete set of the Bulletin.

The Committee continues to be most grateful to the Trustees of the Herbert Stevens Trust Fund (Mr Nigel Crocker, Mr Peter Oliver and Mr Richard Price) for their time and expertise advising on the performance of the Fund.

Meetings

The number of evening meetings held at Imperial College, London, was maintained at seven in 2006. A total of 179 (132 members and 47 guests) attended these meetings, which represented an average attendance of 26. The programme of speakers during the year again covered a wide variety of ornithological subjects, including the experiences of a nature conservationist, the genus *Casuarius*, the birds of Diego Garcia, avian influenza, the recovery of the Cory's Shearwater *Calonectris diomedea* population, avian nomenclature and the future of relationships between birds and mankind. As in previous years, the April meeting following the AGM took the form of a social evening, during which informal short talks and brief discussions were contributed by seven participants on a range of subjects. These included recovering ornithological material from two archaeological sites (in Mauritius and Morocco), the wild bird trade in West Africa, avian nomenclature and the need for a universal taxonomic committee, bird observations in Venezuela and the Black Sea, and Barn Owls *Tyto alba* in the UK. Summaries of these are to be found in the Club Announcements section of the Bulletin. Regrettably, Imperial College increased their catering and venue charges again for 2006 requiring an increase in the cost of Club dinners to £21 per head.

The Bulletin

Vol. 126 comprised 324 pages and 36 papers of broad geographical spread. Three new taxa were described, all from the Neotropics, namely new subspecies of *Caprimulgus* nightjar, *Coeligena* hummingbird and *Atlapetes* brush-finch. Taxonomy and nomenclature were again well represented, the latter including a particularly important contribution on new avian names introduced in Darwin's classic work, *The zoology of the HMS Beagle*. Furthermore, a 64-page supplement, the proceedings of the Recent Avian Extinctions conference held in 2004, was also published, to coincide with the June issue.

For papers published in 2006, (excluding those published in the supplement), the interval between receipt and publication was 5–26 months, with a mean of *c*.12 months, a figure which would have been two months lower but for the very late receipt of three manuscripts following author revision. The Bulletin received a total of 55 new manuscripts in 2006 and there appears to be a trend towards longer manuscripts being submitted. Of the total, 13 were rejected, and the rest have been accepted or are still being refereed for future publication.

Grateful thanks are due, as always, to referees who have given freely of their time and expertise, to Eng-Li Green, of Alcedo Publishing, and Mike Dawson and team, of Crowes (printers), for their support and efficiency. Mary Muller produced the index, Tony Statham the cover information and Club Announcements, and staff at the Natural History Museum, Tring, offered much-valued support to the *Hon. Editor*. Special thanks are given to Mary Muller for her 17 years of compiling the index, a post from which she will retire after completing the 2006 index.

Bulletin—Institutional Subscriptions

Subscriptions from Institutional Subscribers during 2006 totalled 120 (116 in 2005), with 29 in the UK and 90 overseas (26 different countries). Of the latter 40 were from North America, 32 from Europe (including Russia), eight from Australasia, five from Africa, four from Asia and one from South America.

Report of the Joint Publications Committee

This joint committee (JPC), which now conducts most of its business by e-mail, met once in 2006. The Chairman of the committee is alternately appointed by the BOC and BOU. Nominated by the BOC, Tom Gladwin continues to chair the committee until April 2007.

Publications The proceedings of the conference on Recent Avian Extinctions were published in June as a Supplement to *Bull. Brit. Orn. Cl.* 126. The checklist, *The birds of São Tomé & Príncipe with Annobón* was also published in 2006. Checklists on *The birds of Borneo* and *The birds of Barbados* are on schedule for publication in 2007. The manuscript of *The status of birds in Britain and Ireland*, planned for publication in the spring of 2008 as part of the BOU's 150th anniversary celebrations, is expected by late summer 2007.

Acknowledgements The Committee is grateful to all who have contributed to its work, especially to Bob Cheke as Commissioning Editor, and Steve Dudley for progressing and managing the titles in its charge.

Membership

As at 31 December 2006, there were 471 paid-up Members (512 in 2005): 242 from the UK and 229 from overseas (43 countries). Overseas members comprise Europe (95), North America (59), Australasia (30), Africa (19), Asia (12) and South America (14). The Club welcomed 20 new Members, but mourned the death of four: Dr W. Burnham (1995–2006), Dr J. F. Clements (2001–06), Dr H. C. S. Eck (1995–2006) and Revd. G. K. McCulloch, OBE (1944–2005). Eleven resignations were received, and 35 were removed under Rule 24.

Finance

Although the Club met the costs of two publications in 2006, both were of modest size. Recent Avian Extinctions, at 64 pages, was distributed to Members and Institutional Subscribers as a Bulletin Supplement, with copies also being available for sale separately. The cost of £2,323 was covered by interest earned on the Clancey bequest. Costs to the Club of £4,231 for the joint BOU/BOC Checklist *The birds of São Tomé & Principe with Annobón* (Gulf of Guinea) came out of the Club's general funds. After meeting these costs, there was a small surplus for the year of £408 remaining on Restricted Funds and a surplus of £3,738 on Unrestricted Funds, compared with an overall breakeven position in 2006.

Total income for the year amounted to £40,611, including £13,731 from subscriptions, which included tax recovered from Gift Aid and Deeds of Covenant (£748). Investment income of £18,193 was just a fraction higher than the previous year. Sales of BOC own publications, at £660, showed a drop of £400 compared with 2005, but income from sales from BOC/BOU joint publications increased from £2,237 to

£3,638, benefiting particularly from a full year's sales of the *Bird Atlas of Uganda* and initial sales of the Gulf of Guinea checklist.

With lower expenditure on publications, total expenditure, at £36,465, was £2,000 less than in 2005. Bulletin costs, excluding the Supplement, were down by about £1,000, but administration costs include increases in the management fee paid to the BOU for the services of Steve Dudley and in storage costs for housing publications.

Investments

On the advice of the Trustees of the Herbert Stevens Fund (HSF), a holding in a fixed-interest unit trust was sold towards the end of the year and reinvested in a fund with a wider range of investments. Whilst this resulted in a small loss of £996 compared with the value at December 2005, the new fund is already valued slightly above its cost. The remaining two holdings in the HSF benefited from the general rise in share prices, resulting in an increase in market value of £32,331, taking the value of the HSF at 31 December 2006 to £288,049, an increase of 12.2% over 12 months.

Following approval of members at the 2006 Annual General Meeting, the small investment comprising the Barrington Fund was sold during the year and the proceeds of £1,152 added to the General Deposit Account. Total investments in the Balance Sheet are standing at £337,049, the additional £49,000 being the capital from the Clancey bequest, which continues to be held in a fixed-rate Building Society account.

Reserves

Of the Club's total resources, £20,000 remains in a Designated Unrestricted Fund towards the cost of future publications, two of which, *The birds of Borneo* and *The status of birds in Britain and Ireland*, are likely to be quite costly to produce. The two restricted funds, the Clancey bequest and the Publications Fund, totalled £59,856 at the year-end and are held as backing for new developments for the Bulletin or additions to other Club publications, respectively. The investments that form a large part of the Unrestricted Funds built up from past legacies provide a regular source of income towards the Club's administrative expenses, whilst additional liquid funds are available to finance any of the future publications. This can involve substantial expenditure against a rather slow payback as expected with specialist publications that are highly regarded, but fall within an inevitably limited market.

Risks

The Committee has reviewed the major risks to which the Club is exposed, particularly with regard to managing the Club's cash resources and overseeing the production of new publications within a controlled timetable. Investments are held in diversified portfolios within separately managed charity unit trusts providing an acceptable balance between security and risk. In particular, the Herbert Stevens Fund is managed by three Trustees, who report regularly to the Committee. Additionally, the Joint Publications Committee considers proposals for further publications and puts forwards recommendations, bearing in mind the level of resources available.

Trustees' responsibilities

Under the Charities Act 1993, the Trustees are required to prepare a statement of accounts for each financial year which give a true and fair view of the state of affairs of the charity at the end of the financial year and of the incoming resources and application of resources in the year. In preparing the statement the trustees are required to:

- Select suitable accounting policies and then apply them consistently;
- Make judgements and estimates that are reasonable and prudent;
- State whether applicable accounting standards and statements of recommended practice have been followed, subject to any material departures disclosed and explained in the statement of accounts;
- Prepare the financial accounts on the going concern basis unless it is inappropriate to presume that the charity will continue its operations.
- The Trustees are responsible for keeping proper accounting records which disclose with reasonable accuracy at any time the financial position of the charity and to enable them to ensure that any

statement of account prepared by them complies with the regulations under section 41(1) of the Charities Act 1993. They are also responsible for safeguarding the assets of the trust and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Approved and signed on behalf of the Trustees
M. B. Casement
Cdr. M. B. Casement, OBE, RN Chairman Date: 24 April 2007

BRITISH ORNITHOLOGISTS' CLUB
Registered Charity No. 279583
BALANCE SHEET—31 December 2006

	Notes	**2006**		*2005*	
		£	£	£	£
FIXED ASSETS					
Projection Equipment	2		**162**		*324*
INVESTMENTS					
At market value	3		**337,049**		*306,876*
CURRENT ASSETS					
Stock of publications		**100**		*100*	
Cash at bank and in hand		**962**		*5,285*	
Cash on deposit		**117,739**		*108,980*	
Prepayments		**80**		*375*	
Other debtors		**1,215**		*1,707*	
		120,096		*116,447*	
CURRENT LIABILITIES					
Subscriptions in advance		**(4,879)**		*(4,848)*	
Creditors falling due within one year		**(1,036)**		*(2,878)*	
			114,181		*108,721*
TOTAL ASSETS			**451,392**		*415,921*
FUNDS					
Unrestricted					
Designated	4		**20,000**		*20,000*
Other	5		**371,536**		*336,473*
			391,536		*356,473*
Restricted	6		**59,856**		*59,448*
			451,392		*415,921*

Approved and Signed on behalf of the Trustees
M B Casement
Cdr. M.B. Casement, OBE, RN
Chairman

Date: 24 April 2007

STATEMENT OF FINANCIAL ACTIVITIES—31 December 2006

			2006		*2005*
		Unrestricted	Restricted	Total	*Total*
		£	£	£	*£*
INCOMING RESOURCES					
SUBSCRIPTIONS					
Members		9,131	-	9,131	*9,474*
Institutional subscribers					
Income Tax recoverable		3,852	-	3,852	*2,651*
under Gift Aid & Deeds of Covenant		748	-	748	*758*
		13,731	-	13,731	*12,883*
DONATIONS		139	-	139	*97*
INVESTMENT INCOME					
Herbert Stevens Trust Fund		10,637	-	10,637	*10,410*
Barrington Trust Fund		20	-	20	*36*
Interest received		4,805	2,731	7,536	*7,519*
		15,462	2,731	18,193	*17,965*
SALES OF PUBLICATIONS					
Bulletin		338	-	338	*156*
Other BOC publications		660	-	660	*1,100*
Joint BOU/BOC publications		3,638	-	3,638	*2,237*
		4,636	-	4,636	*3,493*
MEETINGS		3,822	-	3,822	*3,860*
OTHER INCOME		90	-	90	*173*
TOTAL INCOME		37,880	2,731	40,611	*38,471*
RESOURCES EXPENDED					
CHARITABLE EXPENDITURE					
MEETINGS					
Room and equipment hire, speakers' expenses, etc.		1,589	-	1,589	*1,588*
Restaurant		4,042	-	4,042	*4,080*
CONFERENCE SPONSORSHIP		-	-	-	*-*
BOC BULLETIN		12,885	-	12,885	*13,932*
Production, printing and distribution					
OTHER PUBLICATIONS					
Production costs		4,231	2,323	6,554	*11,331*
Publicity, postage and packing		1,128	-	1,128	*688*
ADMINISTRATION	7	10,267	-	10,267	*6,860*
OTHER EXPENDITURE		-	-	-	*-*
TOTAL EXPENDITURE		34,142	2,323	36,465	*38,479*
SHORTFALL / EXCESS OF INCOME					
OVER EXPENDITURE		3,738	408	4,146	*(8)*
Increase in value of investments		31,325	-	31,325	*28,492*
		35,063	408	35,471	*28,484*
TOTAL FUNDS brought forward at 1 January 2006		356,473	59,448	415,921	*387,437*
TOTAL FUNDS at 31 December 2006		391,536	59,856	451,392	*415,921*

NOTES TO THE ACCOUNTS—31 December 2006

1. ACCOUNTING POLICIES

a) Basis of Accounts. The financial statements are prepared under the historical cost convention as modified by the inclusion of investments in the Herbert Stevens and Barrington Trust Funds at market values. They are also prepared in accordance with the Financial Reporting Standards for Smaller Entities and follow the recommendations in Accounting and Reporting by Charities: Statement of Recommended Practice (revised 2005)

b) Investments and Cash Deposits. The Herbert Stevens and Barrington Trust Funds are invested in quoted charity unit trusts and included as investments in the Balance Sheet at year-end market values. Income from these funds and from cash deposits shown in the Balance Sheet under Current Assets is included in Incoming Resources in the Statement of Financial Activities on a receipts basis. The Clancey Bequest is held in a fixed-term, Building Society deposit account which forms part of the total of investments in the Balance Sheet. Interest on this deposit account is brought into the Statement of Financial Activities on an accruals basis.

c) Subscriptions. Subscriptions for the current year and any arrears are included in Incoming Resources in the Statement of Financial Activities. Subscriptions received in advance are carried forward in the Balance Sheet as Current Liabilities.

d) Expenditure is accounted for on an accruals basis.

e) Depreciation. Depreciation of fixed assets is calculated to write off their value over their expected useful lives at an annual rate of 25% on cost.

f) Publications. The cost of publications is written off in the Statement of Financial Activities as incurred except for a nominal stock value of £100 carried in the Balance Sheet.

2. FIXED ASSETS		**2006**
Projection Equipment		**£**
Cost at 1 January and 31 December 2006		**648**
Accumulated depreciation at 1 January 2005		**324**
Charge for the year		**162**
At 31 December 2005		**486**
Net Book Value:	At 31 December 2006	**162**
	At 31 December 2005	*324*

3. INVESTMENTS—at market value	**2006**	*2005*
	£	£
UNRESTRICTED FUNDS		
Herbert Stevens Trust Fund	**288,049**	*256,714*
Barrington Trust Fund	-	*1,162*
RESTRICTED FUNDS		
Clancey Bequest	**49,000**	*49,000*
	337,049	*306,876*

All investments are held in the UK.

4. UNRESTRICTED DESIGNATED FUND

for future publications	**2006** **£**
Balance at 1 January 2006	**20,000**
Designated during the year	**-**
Balance at 31 December 2006	**20,000**

5. OTHER UNRESTRICTED FUNDS

	GENERAL FUND	**HERBERT STEVENS TRUST FUND**	**BARRINGTON TRUST FUND**	**TOTAL**
	£	£	£	£
Balances at 1 January 2006	78,597	256,714	1,162	336,473
Sales during the year	1,152	(1,152)		
Loss on sale of investments	(996)	(10)	(1,006)	
Increase in value of investments during year	-	32,331	32,331	
Shortfall of income over expenditure	3,738	3,738		
Balances at 31 December 2006	**83,487**	**288,049**	**-**	**371,536**

6. RESTRICTED FUNDS

	CLANCEY BEQUEST	**PUBLICATIONS FUND**	**TOTAL**
Balances at 1 January 2006	55,129	4,319	59,448
Expenditure during the year	(2,323)	(2,323)	
Interest received	2,535	196	2,731
Balances at 31 December 2006	**55,341**	**4,515**	**59,856**

a. The Clancey bequest was donated by the late Dr P. A. Clancey with the request that it should be used to support and enhance the Club's Bulletin.

b. The Publications Fund is available to finance Club publications other than regular issues of the Bulletin.

7. ADMINISTRATION EXPENSES

	2006 **£**	*2005* *£*
Club's share of rental of storage unit	**1,378**	*916*
Audit and Independent Examination fees	**600**	*550*
Depreciation	**162**	*162*
BOU administration services	**6,034**	*3,080*
Other administration expenses	**2,093**	*2,152*
	10,267	*6,860*

8. REIMBURSEMENT OF EXPENSES

Trustees do not receive any remuneration or any reimbursement of costs they may incur in attending Trustee meetings. They are reimbursed for any other expenses incurred on behalf of the Club. The total amount reimbursed during the year was £553 (*2005 £1,072*).

INDEPENDENT EXAMINERS REPORT TO THE TRUSTEES OF THE BRITISH ORNITHOLOGISTS' CLUB

I report on the accounts of the Club for the year ended 31 December2006, which are set out on pages 92–95.

Respective responsibilities of Trustees and Examiner

The charity's Trustees are responsible for the preparation of the accounts. The charity's Trustees consider that an audit is not required for this year (under section 43(2) of the Charities Act 1993 (the 1993 Act)) and that an independent examination is needed. It is my responsibility to:

- Examine the accounts (under section 43(3)(a) of the 1993 Act);
- To follow the procedures laid down in the General Directions given by the Charity Commissioners (under section 43(7)(b) of the 1993 Act); and
- To state whether particular matters have come to my attention.

Basis of independent Examiners' report

My examination was carried out in accordance with the General Directions given by the Charity Commissioners. An examination includes a review of the accounting records kept by the charity and a comparison of the accounts presented with those records. It also includes consideration of any unusual items or disclosures in the accounts, and the seeking of explanations from you as Trustees concerning any such matters. The procedures undertaken do not provide all the evidence that would be required in an audit and, consequently, I do not express an audit opinion on the view given by the accounts.

Independent Examiners' statement

In connection with my examination, no matter has come to my attention:

(1) which gives me reasonable cause to believe that, in any material respect, the requirements:
    - to keep accounting records in accordance with s41 of the 1993 Act; and
    - to prepare accounts which accord with the accounting records and to comply with the accounting requirements of the 1993 Act have not been met; or

(2) to which, in my opinion, attention should be drawn in order to enable a proper understanding of the accounts to be reached.

Alan Peal
Alan Peal ACA—Principal Porritt Rainey
Chartered Accountants

25 April 2007

Taxonomic notes on some insular *Loriculus* hanging-parrots

by N. J. Collar

Received 17 February 2006

Loriculus (amabilis) sclateri

Collar (1997) treated the taxon commonly known as Moluccan Hanging-parrot *Loriculus amabilis*—which in Dickinson (2003) has three subspecies (*amabilis* from Halmahera and Bacan, *sclateri* from Sula, and *ruber* from Peleng and Banggai)—as two monotypic species, Moluccan Hanging-parrot *L. amabilis* and Sula Hanging-parrot *L. sclateri*; and in this he was followed by Clements (2000). However, Coates & Bishop (1997) and Juniper & Parr (1998) maintained these taxa as one species (albeit both with comments that perhaps a split is in order) and continued to recognise the subspecies *ruber*, as did Dickinson (2003), who declined to accept the split owing to a lack of detailed evidence.

Collar (1997) separated *L. sclateri* from *L. amabilis*—both described by Wallace (1862, 1863) within a few months of each other, but with no suggestion of a mutual taxonomic proximity—on the following grounds: *sclateri* is very considerably larger (14 cm in length vs. 11 cm), with no red on the head but a large orange patch, often with a large red centre, on the lower mantle and rump, and the sexes are similar (whereas they differ in *amabilis*). He missed the further points that the uppertail-coverts in the diminutive *amabilis* extend to or beyond the tail (if this is not an artefact of preparation technique), and are considerably brighter red. All these differences, best appreciated by reference to Figs. 1–2, are quite as strong as those that distinguish species such as Yellow-throated Hanging-parrot *L. pusillus* from Flores Hanging-parrot *L. flosculus* and Sri Lankan Hanging-parrot *L. beryllinus* from Vernal Hanging-parrot *L. vernalis*, all of which are widely accepted, including by Dickinson (2003).

The size difference is particularly notable; no other polytypic *Loriculus* shows any significant mensural variation between subspecies, and certainly nothing approaching this scale. Measurements given by Forshaw (1989) are sufficient to demonstrate the remarkable morphometric disjunction. Table 1 reveals that nominate *sclateri* is approximately 32% larger on bill size, 19% on tarsus- and tail-length, and 23% on wing-length, and Figs. 1–2 indicate how these differences must translate into a very substantial difference in mass (*sclateri* may well be twice the weight of *amabilis*), not the most propitious of circumstances for the transfer of gametes.

The Sula Islands have strong zoogeographical affinities with Sulawesi (van Bemmel 1948, White & Bruce 1986). Stattersfield *et al.* (1998), who did not follow Collar (1997) over *L. sclateri*, identified 16 restricted-range bird species in the Banggai and Sula Islands Endemic Bird Area (EBA), eight of which occur in other

TABLE 1

Means and ranges of measurements of specimens of *Loriculus* (*a.*) *amabilis*, *L.* (*a.*) *sclateri* and *L.* (*a.*) *ruber* in Forshaw (1989). Sample sizes: *amabilis* nine males, three females; *sclateri* 11 males, five females; *ruber* two males, two females, with five unsexed *ruber* yielding: bill, mean 11.2 (range 11–12); tarsus, mean 12.0 (11–13); wing, mean 93.4 (88–99); and tail, mean 36.2 (33–39).

	bill ♂	bill ♀	tarsus ♂	tarsus ♀	wing ♂	wing ♀	tail ♂	tail ♀
amabilis	9.2	9.0	10.2	10.3	77.2	75.7	31.3	32.0
	9–10	9.0	9–11	10–11	74–84	71–80	30–33	31–33
sclateri	12.1	12.0	12.1	12.4	93.9	93.6	37.4	38.0
	11–13	11–13	11–13	12–13	89–102	88–106	35–41	36–40
ruber	12.0	11.0	12.5	13.0	87.0	90.0	36.0	38.5
	12.0	11.0	12–13	13.0	86–88	89–91	34–38	38–39

EBAs: of these eight, six occur in the Sulawesi EBA, one in the Banda Sea, Buru, Seram and North Maluku EBAs, and only one (*L. amabilis sensu lato*) in the North Maluku EBA (where birds are known from Halmahera and Bacan). The distribution of *L. amabilis sensu lato* (Moluccas, Sula, Peleng and Banggai) is therefore anomalous, and tends to reinforce the clear morphological evidence that *L. sclateri* is far better split from *L. amabilis* specifically.

To be conclusive, however, this judgement requires a clarification of the status first of the taxon *ruber* and then, because of their potential intermediacy, of the neglected insular forms of Sulawesi Hanging-parrot *L. stigmatus*.

Loriculus sclateri ruber

Under the entry for *L. sclateri*, Collar (1997) dropped *ruber* (Peleng and Banggai Islands) as a valid subspecies, pointing out that it was based on a character present in at least some *L. amabilis* (*sic*, in error for *L. sclateri*), and was probably an age-related character. However, this was mistaken. The original description (Meyer & Wiglesworth 1896) reports that *ruber* is very like *sclateri*, 'sed pallio scarlatino et fronte perspicue rubra' ('but mantle scarlet and forehead clear red'), continuing with more detail in German (my translation):

> Very near *sclateri,* but distinguished fairly easily by its much redder mantle. In *sclateri* this is orange with red in the middle, in *ruber* red with narrow orange edging, which virtually disappears at the sides. Our specimens of *sclateri* vary rather widely in the extent of the red; Herr Büttikofer has kindly sent us the one with the most extensive red in a series of 25 in Leiden, but it does not approach our specimens from Peleng and Banggai, and the red of this bird is deeper, not so orange-tinged. After we sent him a specimen of the new form, Herr Büttikofer reported: "The mantle shows substantially more red than the majority of our specimens, but you will see that the red on one of our Sula birds (the specimen he sent us) is hardly any less pronounced." Herr Büttikofer also sent us a specimen from Sula with rather extensive brown-red on the forehead, but it does not match the

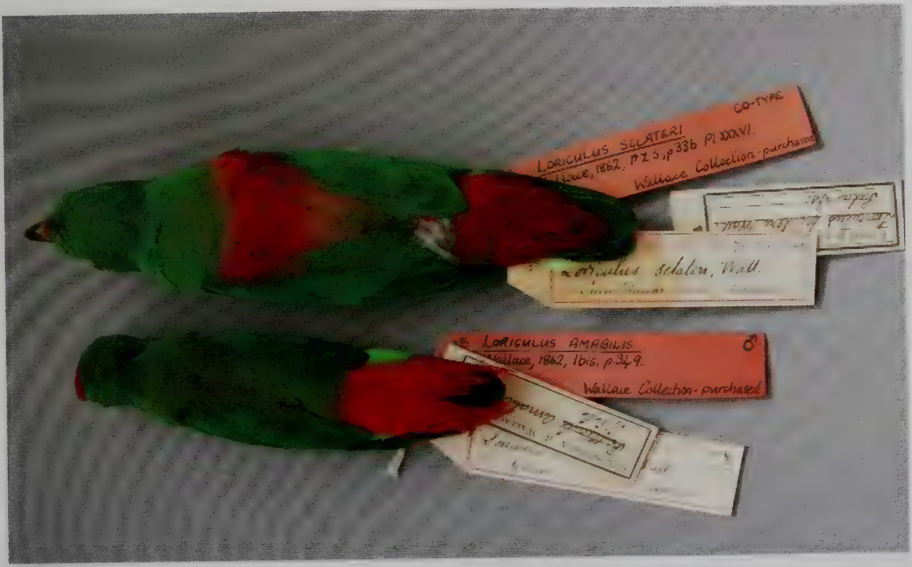


Figure 1. Dorsal view of the type-specimens of (above) *Loriculus sclateri* (BMNH 73.5.12.1549) and (below) *L. amabilis* (BMNH 73.5.12.1557) in the Natural History Museum, Tring, UK (N. J. Collar © Natural History Museum)

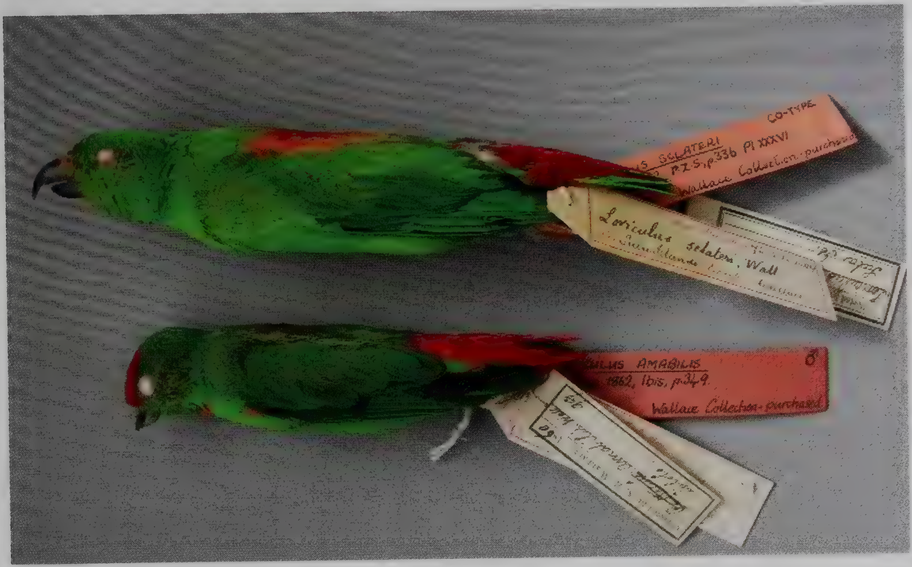


Figure 2. Lateral view of specimens in Fig. 1a; the bill of *L. amabilis* is slightly damaged (N. J. Collar © Natural History Museum)

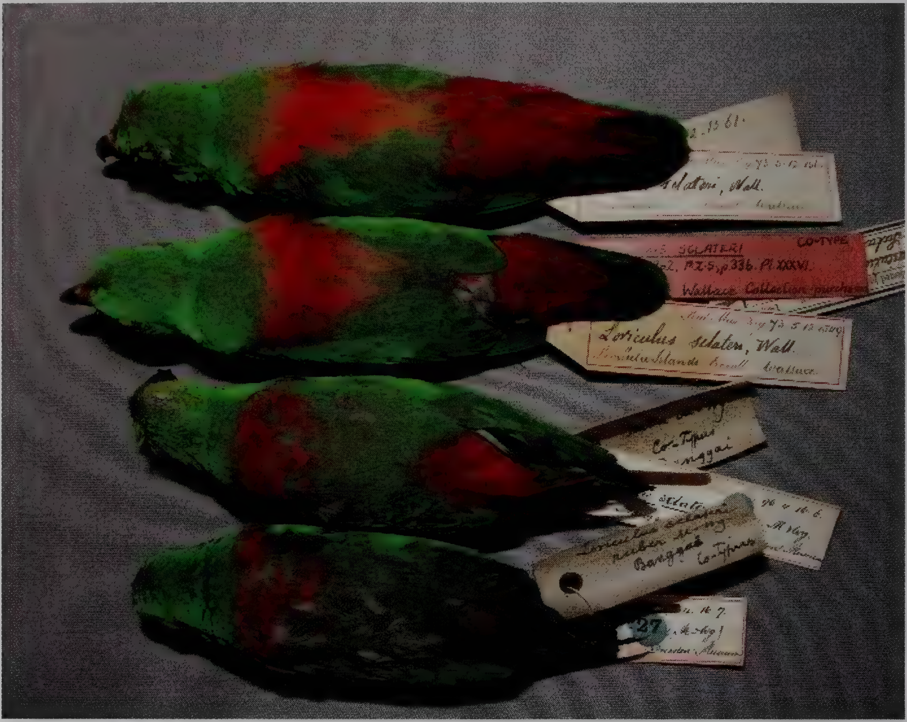


Figure 3. Two (upper pair) *Loriculus sclateri sclateri* (BMNH 73.5.12.1549, 1561) and two (lower pair) *L. s. ruber* (BMNH 96.4.16.6–7) (N. J. Collar © Natural History Museum)

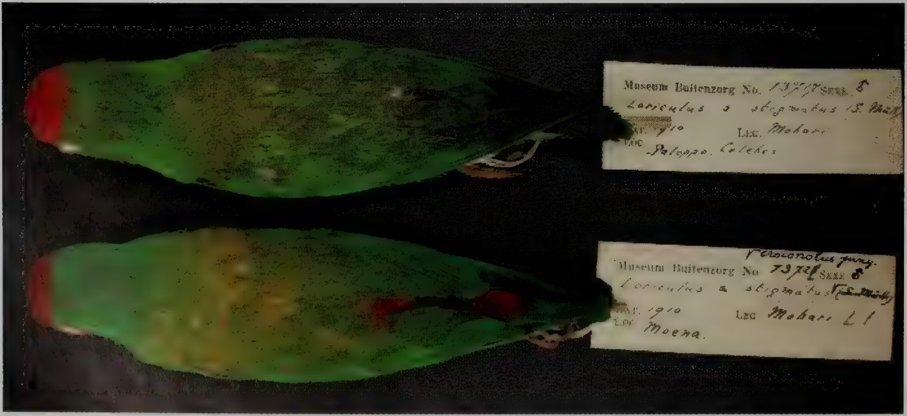


Figure 4. A specimen (above) of *Loriculus stigmatus stigmatus* (MZB 13717) and the type (below) of *L. s. croconotus* (MZB 13728) (Mohammad Irham © Museum of Zoology, Bogor)

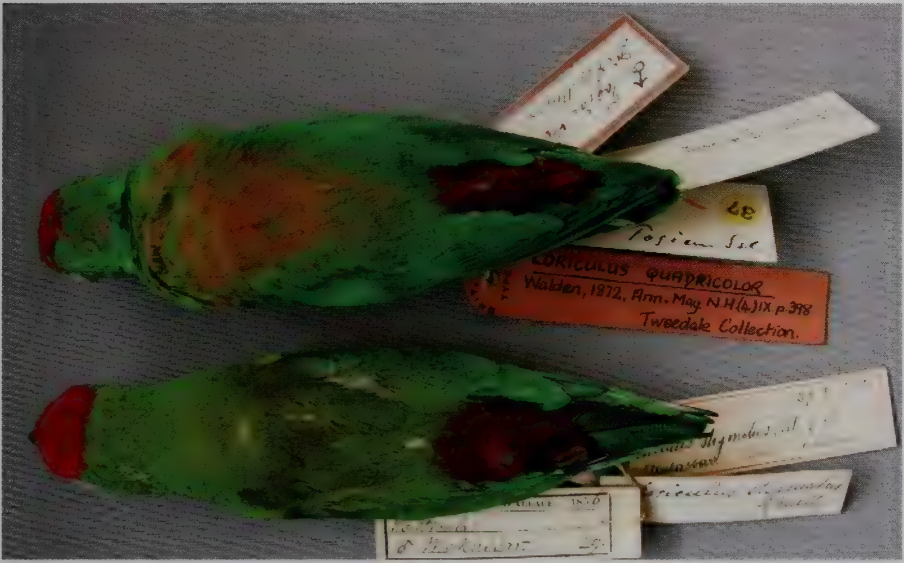


Figure 5. Type of (above) *Loriculus stigmatus quadricolor* (BMNH 1889.1.20.291) and an example of (below) *L. s. stigmatus* (BMNH 57.8.3.5) (N. J. Collar © Natural History Museum)

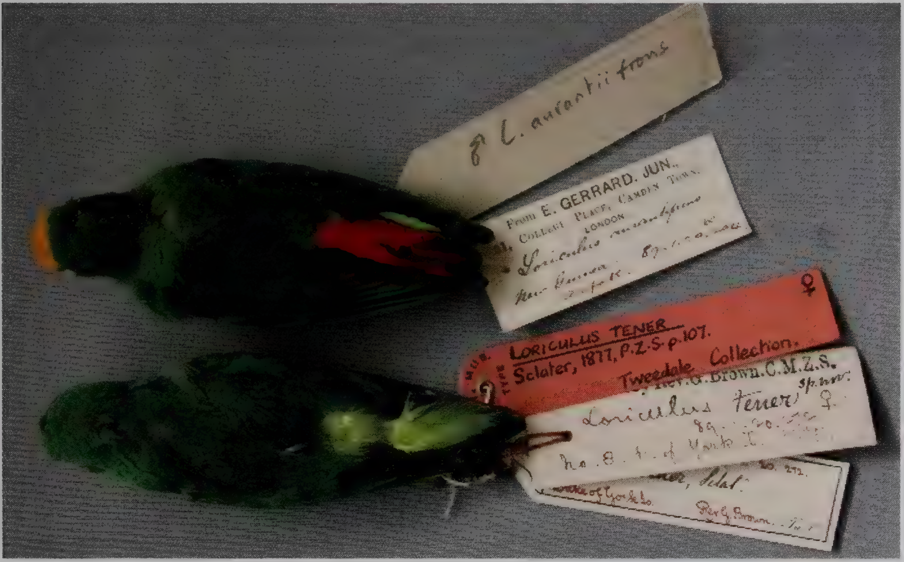


Figure 6. Type of (above) *Loriculus tener* (BMNH 1889.1.20.272) and one (below) *L. aurantiifrons meeki* (BMNH 89.1.20.294) (N. J. Collar © Natural History Museum)

Peleng and Banggai specimens, in which this is much more pronounced. Herr Büttikofer noted in this regard: "The same applies to the red-brown forehead, which in almost all our specimens from Sula does not show any red-brown. However, one of the specimens I send you for comparison shows that this dirty red is not entirely absent from Sula birds" . . . Apart from these two main character differences, the red of the rump in *ruber* is rather brighter and prettier, more comparable to the mantle coloration, whilst in *sclateri* this red is darker than the back.

In the Natural History Museum (NHM), Tring, UK, there are two specimens of *ruber* and 12 *sclateri*, and a glance at them reveals that the mantle of several *sclateri* are quite as red, and indeed stronger red, than the two *ruber*. It was on this basis that Collar (1997), relying on the truncated diagnosis in Forshaw (1989) ('similar to *sclateri* but with scarlet on mantle'), declined to recognise *ruber*. However, a closer examination of the two NHM *ruber* and reference to the original description above indicate that the *pattern* of the red on the mantle of *ruber* is different: where in *sclateri* the red is enclosed above and below by a rather broad triangular orange border, in *ruber* the upper orange border is very narrow and, as Meyer & Wiglesworth (1896) observed, virtually absent at the sides (Fig. 3). Meyer & Wiglesworth (1896) also observed, as a minor character, that the uppertail-coverts of *ruber* are brighter than in *sclateri*, and concolorous with the mantle; this character is apparent in the NHM material. (M. LeCroy, in refereeing this paper and checking text against ten *sclateri* and five *ruber* in the American Museum of Natural History [AMNH], points out that most *sclateri* show no red on the back, only a bold mustard-orange, but confirms that those that do show the enclosed-triangle pattern. She also judges that the throat patch in *ruber* is more circular, less elongated, than in *sclateri*, and confirms the former's brighter uppertail-coverts.)

Rather more puzzling is the diagnostic reference to a clear red forehead. This is not apparent in the NHM material; but both specimens have a dirty reddish-brown forehead (as do the birds in AMNH: M. LeCroy *in litt.* 2006), which can also be seen, albeit nothing like so clear-cut, in four of the NHM *sclateri*. Meyer & Wiglesworth (1896) referred to a specimen in Leiden of *sclateri* with a brownish-red forehead, albeit still not as pronounced as on *ruber*, but nowhere in their German text do they repeat their Latin diagnosis that *ruber* has a clear red forehead. Rather, it would appear from their comparison with *sclateri* that the forehead of *ruber* is dull reddish brown.

Forshaw (1989) carries measurements of *ruber* which suggest no appreciable difference in size from *sclateri* (see Table 1, including legend for unsexed birds); thus *ruber*, which is in any case to the west of *sclateri*, cannot be considered a morphometric stepping-stone between north-eastern *amabilis* and central-placed *sclateri*. It is also apparent—and this too is important for the unimpeded resurrection of specific status for *sclateri*—that the forehead coloration of *ruber* in no way allies it with the red-crowned *amabilis*. Thus *Loriculus sclateri* moves much closer to confirmation as a valid species, with *ruber* a valid subspecies, differentiated from *sclateri* by its more consistently red and less yellow-edged mantle, paler red rump and uppertail-coverts, and more consistently and clearly brownish-red forehead.

This then leaves two neglected subspecies of *Loriculus stigmatus* to be revisited and revived, and the implications for the position of *sclateri* to be assessed.

Loriculus stigmatus croconotus
Loriculus stigmatus quadricolor

When discussing *L. stigmatus* White & Bruce (1986) remarked: 'Jany's (1955a: 220) *croconotus* (TL [=type-locality] Muna [Island]) must be considered a synonym, since Voous & van Bemmel (1951) were unable to distinguish birds of Muna and Butung [Buton] from those of Sulawesi, and the same applies to Walden's (1872: 398) *quadricolor* (TL Togian) based on the same characters as are attributed to *croconotus*.' Both taxa thereafter sank into synonymy. Although both were treated by Forshaw (1978) they were dropped by Forshaw (1989), who was followed by Collar (1997), Juniper & Parr (1998) and Clements (2000), whilst Dickinson (2003) provided a footnote on the merging of *croconotus* but made no reference to *quadricolor*.

Several remarks are required here, the first merely being that the correct short citation is to van Bemmel & Voous (1951), not vice versa. Next: these authors were writing *before* the description of *croconotus*, and simply reported: 'There is no difference between birds from Buton and Muna and a series from Celebes in our collection.' It is not clear from this how carefully the material was inspected, and it surely cannot be appropriate to synonymise a subspecies on the basis of an examination that took place four years before it was established. We cannot be certain that van Bemmel & Voous (1951) noticed or considered the characters used by Jany (1955)—paler green wings and tail, and (my translation) 'strong eggyolk-yellow colour to the upper back (not a washed/faint greenish yellow as in *stigmatus*).' Jany (1955) noted that birds from south-east Sulawesi belong to nominate *stigmatus* and show no approach to *croconotus*, which he considered a well-marked subspecies.

NHM lacks any specimens of *Loriculus* from Buton and Muna, but a photograph of a specimen of nominate *stigmatus* and the type of *croconotus* in the Museum of Zoology in Bogor, Indonesia, shows the yellow coloration of the back of the latter which partly diagnoses it, and possibly its paler green wings (Fig. 4). Moreover, in April 2006 I was able to find a single specimen from Muna in the RMNH collection (otherwise containing 21 skins of Sulawesi *stigmatus*), and this (RMNH Cat.45) shows both diagnostic characters of Jany's (1955) *croconotus*. Further examination of material is clearly in order, but at present *croconotus* should be permitted to stand.

White & Bruce's (1986) comment about *quadricolor* is their own, not based on anything written by van Bemmel & Voous (1951), and suggests that they regarded it as having been established on the same characters as *croconotus*. This is mistaken. Walden (1872) distinguished *quadricolor* 'from *stigmatus* by the golden back, by the chin and throat-spot being much smaller, and the red of the uropygium not being quite so dark.'

In NHM there are three specimens of *quadricolor* and 19 *stigmatus*. Examination of this material shows very clearly that *quadricolor* has a distinct golden-yellow mantle and back, whereas mainland Sulawesi birds have only a very indistinct trend towards yellow in this area (Fig. 5) and *croconotus* is plainer yellow. The red throat patch is indeed reduced in all three *quadricolor* by comparison with most *stigmatus*, although a few specimens of the latter show equally small or even smaller patches (possibly an age character). However, the rumps of *quadricolor* are indeed a shade brighter than those of *stigmatus*. On this basis, although the sample size is very small, *quadricolor* must be allowed to stand as a valid taxon.

Measurements in Forshaw (1978) indicated no significant differences between *quadricolor* and *stigmatus*, but the reinstatement of this subspecies contributes to the gathering evidence that the Togian Islands have rather more zoogeographical and conservation importance than they have been heretofore allowed. Discussing endemism on these islands, White & Bruce (1986) referred to *Ixos affinis aureus*—Togian Golden Bulbul *Thapsinillas affinis aurea* in Dickinson (2003), Togian Northern Golden Bulbul *T. longirostris aurea* in Fishpool & Tobias (2005)—and 'four additional subspecies [which] are invalid or not well differentiated,' but until recently the only exploration of the islands was by A. B. Meyer as long ago as 1871 and J. J. Menden for a few days in 1938. With the discovery of Togian Hawk-owl *Ninox burhani* (Indrawan & Somadikarta 2004) the islands have taken on new interest, and further work there may produce new taxa.

What emerges rather more interestingly is that there is a tendency in eastern insular forms of *stigmatus* to yellow and golden-yellow on the back, continuing stepwise eastwards with the red-centred yellow backs of *L. sclateri ruber* and *L. sclateri sclateri*. Moreover, NHM's single male *quadricolor* (the holotype) shows flecks of green in the red crown, whilst *L. sclateri ruber* shows the residuum of a brownish-red forehead, so that a progressive loss of the red crown on birds from mainland Sulawesi east to Sula is also suggested; and *quadricolor*'s brighter rump is midway towards that of *ruber* and *sclateri*. Undoubtedly *L. sclateri* must now be allied with *L. stigmatus* rather than *L. amabilis*, reaffirming the biogeographic link between Sulawesi and Sula. Even so, *sclateri*'s strong red mantle set in yellow, and lack of a bright red crown, coupled with its slightly brighter rump, continues to indicate species status; it doubtless forms a superspecies with *stigmatus*. We thus arrive at the following arrangement.

Loriculus stigmatus Sulawesi Hanging-parrot	
—*L. s. stigmatus* (S. Müller, 1843)	Sulawesi
—*L. s. croconotus* Jany, 1955	Muna & Buton Is
—*L. s. quadricolor* Walden, 1872	Togian Is
Loriculus sclateri Sula Hanging-parrot	
—*L. s. ruber* Meyer & Wiglesworth, 1896	Peleng & Banggai Is
—*L. s. sclateri* Wallace, 1863	Sula Is

Loriculus amabilis Wallace, 1862 Moluccan Hanging-parrot Halmahera, Bacan

Loriculus (aurantiifrons) tener

Sibley & Monroe (1990) split the form *tener* (Green-fronted Hanging-parrot) of the Bismarck Archipelago from mainland New Guinea *aurantiifrons* with the remark: 'May be conspecific with *aurantiifrons*, but the distinctness of this isolate suggests treatment as an allospecies.' In this they were followed by Collar (1997), Juniper & Parr (1998), Stattersfield *et al.* (1998) and Clements (2000). However, Dickinson (2003) retained the two taxa as one species, with the note: 'Collar (1997) treated *tener* as a separate species (it lacks the orange front).'

The information about the missing orange front is of course correct, but the context in which it is given seems to suggest that this is the only difference between the taxa, and that it is insufficient to engender confidence in the new arrangement. However, Collar's (1997) description of *tener* is framed in terms of several other differences from *aurantiifrons*, and reads (with the corresponding colour he gives for *aurantiifrons* interpolated in square brackets): 'forehead green [golden-yellow], throat patch orange-red [red], rump and uppertail-coverts yellow [red]; underside of tail pale blue [no colour given; by implication green]' (see Fig. 6). The orange or golden-yellow forehead in *aurantiifrons* is present in the male only; its lack in *tener* means that the sexes appear generally similar in *tener*, rather obviously different in *aurantiifrons* (though females of both taxa have an aquamarine wash on the face which distinguishes them from males: M. LeCroy *in litt.* 2006).

In NHM material it is evident that the difference in undertail colour is between pale blue in *tener* (type only available) and darkish grey-blue in *aurantiifrons*; this does not seem to be a dependable character for diagnosis, as confirmed by M. LeCroy (*in litt.* 2006), who considers the undertail colour in the larger AMNH sample variable and hard to discriminate. The difference in breast-spot colour is definite, but not a strong feature. By contrast, the differences in forehead colour and rump colour between males of the two taxa are very considerable, producing two very distinct taxa. Again, one may observe that the differences are quite as strong as those that distinguish accepted species such as *L. pusillus* from *L. flosculus* or *L. beryllinus* from *L. vernalis*, and it is wholly reasonable to treat *tener* specifically. The Bismarck Archipelago is, of course, characterised by a high degree of avian endemism, and *L. tener* is one of 35 bird species restricted to New Britain and/or New Ireland and/or their satellite islands (Stattersfield *et al.* 1998).

Evaluations against a quantitative scoring system

A referee, P. Andrew, proposes that these taxa be evaluated using the quantitative system for evaluating the distinctiveness of allopatric taxa outlined recently by Collar (2006a,b). In this system, a major character (pronounced difference in colour or pattern of a body part) scores 3, a medium character (clear difference, reflected more by shade or extent than by colour or presence/absence) 2, a minor character (weak difference in shade or extent) 1, a threshold of 7 is set to allow species status, and no taxon can qualify for this status on minor characters alone. In Collar (2006a) I only allowed morphometric differences to count as minor characters, for reasons of complexity of material and inadequately developed criteria, but here I regard this restraint as unnecessary.

Loriculus sclateri, as constituted here, differs from *L. amabilis* in its size (score 3), colour of mantle (2), lack of red forecrown (3), and darker (1) and questionably shorter (1) rump and uppertail-coverts, total 9–10. *Loriculus sclateri ruber* differs from *L. stigmatus quadricolor* (these forms showing the closest approach to each other in the two species) in its much bolder coloured mantle (3), lack of red forecrown (3) and brighter rump (1), total 7. *Loriculus sclateri ruber* differs from the nominate by pattern and shade of mantle (1), brownish-red forecrown (1), shape of throat patch (1) and shade of rump (1), total 4. *Loriculus stigmatus croconotus* differs from the nominate by its yellow mantle (1) and brighter green wings (1), total 2, and from *L. s. quadricolor* by its weaker coloured mantle (1) and rump (1), possibly also brighter green wings (1), total 2–3. The latter taxon differs from the nominate by its golden-orange mantle (2), questionably smaller throat patch (1) and brighter rump (1), total 3–4. *Loriculus tener*, as constituted here, differs from *L. aurantiifrons* by its green forehead (3), orange-red throat patch (1), yellow rump and uppertail-coverts (3), total 7.

I should perhaps comment that this system, which I describe as 'simplistic, crude and arbitrary' but at least bringing a degree of consistency and transparency to a necessarily subjective process (Collar 2006a), was developed to serve as an aid in unresolved or newly proposed cases, as here. Inevitably, however, it may be invoked retrospectively, as it were, to highlight taxa whose status as species is more a matter of tradition and assumption (an example might be *Loriculus flosculus* in relation to *L. pusillus*), but it should be noted that the full criteria are still being pieced together (Collar *et al.* in prep.).

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Proposed synonymy of *Sylvia cantillans moltonii* Orlando, 1937, with *Sylvia cantillans subalpina* Temminck, 1820

by Nicola Baccetti, Bruno Massa & Carlo Violani

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Sylvia subalpina Temminck, 1820, was considered valid in place of *Sylvia cantillans* Pallas, 1764, for a very long time, amongst no less than eight alternative species names (cf. Salvadori 1872, Seebohm 1881, Orlando 1939). After Sherborn (1905) had reprinted Pallas's (1764) early work, *cantillans* steadily replaced *subalpina*. Temminck's name *subalpina* was based on an unpublished description sent to him by F. A. Bonelli (Temminck 1820), director of the Natural History Museum of Turin in 1811–30. Bonelli's type (said to be unique by Temminck, 1820: 215) almost certainly never left Turin prior to it being discarded due to insect damage probably before the end of the 19th century (Whitaker 1905, Salvadori 1914). It was taken 'près de la ville de Turin,' i.e. in the environs of Turin, Piedmont, north-west Italy. Also Pallas's (1764) *cantillans*—named more than 50 years earlier in a somewhat ephemeral piece of literature (the appendix of a printed auction catalogue, cf. Rookmaaker & Pieters 2000)—was described from two (male and female) specimens (subsequently lost) obtained in Italy ('uit Italie,' no more precise details being given by Vosmaer 1764).

These are not the only names in the Subalpine Warbler's synonymic labyrinth that refer to Italian type-localities. *S. turdella* and *S. rhodogastra* were described from Sicily by Rafinesque Schmaltz (1810) so briefly as to defy identification, as shown by the contradictory opinions expressed by Salvadori (1872: xlv, 103), Trischitta (1922) and Hartert & Steinbacher (1932–38: 278). Moreover, these names have never entered practical use since their publication: we propose that they are best considered as invalid and unavailable. *Sylvia leucopogon* Meyer, 1822, is an available younger synonym of *S. cantillans*, and was also coined for a Sicilian specimen, subsequently lost according to Hartert (1910). *Sylvia cantillans moltonii* Orlando, 1937, eventually joined the list, to identify Sardinian breeders. The latter subspecies did not meet with favour for nearly 50 years, being considered identical to nominate birds (Vaurie 1959, Williamson 1968, Cramp 1992, Svensson 1992), despite differences in call between Corsica and the French mainland (Cramp 1992 and references therein). More recently, plumage features matching Orlando's (1937, 1939) descriptions, as well as vocal and moult peculiarities, were observed in the recently established Balearic population, compared to Spanish mainland birds (Gargallo 1994). The race *moltonii*—with its north-west Mediterranean insular distribution—was, therefore, fully rehabilitated and even considered a possible allospecies (Shirihai *et al.* 2001).

Separation of insular and mainland forms was less straightforward in the Italian range. The Turin type of Temminck's *subalpina*, a male (Savi 1825, *contra* Temminck 1820), was described as having the underparts 'd'une belle couleur vineuse' ('of a beautiful vinous colour'), matching one of the main features of *moltonii* (Orlando 1937, 1939, Gargallo 1994, Shirihai *et al.* 2001). Savi (1825, 1827–31), the first author to give complete descriptions of Subalpine Warbler's plumages and behaviour from field experience in the north Italian mainland, mentioned the typical call (likening it to a Wren *Troglodytes troglodytes*) and its puzzling primary moult, apparently being undertaken also in winter—two more of the alleged characters of *moltonii*. More recently, Cova (1976), Festari *et al.* (2002) and Brambilla *et al.* (in press) concluded that *moltonii* also breeds throughout the northern Italian mainland.

That *moltonii*'s range in continental Italy is broad and reaches the area where the type of *subalpina*—and possibly even of *cantillans*—were collected, poses some problems for current nomenclature. The simplest and least disruptive solution, which we propose here, is that *S. cantillans moltonii* should be regarded as a junior synonym of *S. c. subalpina*. This is supported by Bonelli's description (*in* Temminck 1820) of the underparts of *subalpina* and by the large numbers with Wren-like calls that Savi (1827–30) heard as early as 1810–30 along the entire coast of Tuscany and in eastern Liguria (i.e. adjacent to Piedmont). Turin itself was probably then—as well as now (Mingozzi *et al.* 1988, Meschini & Frugis 1993, Hagemeijer & Blair 1997)—on the very edge of the species' breeding range. In this scenario, the male *cantillans* syntype, which Pallas (1764) described as 'subtus testacea' (i.e. terracotta colour below, and not vinous pink) can be regarded either as a breeder from the 'non-*subalpina*' sector of the Italian range (i.e. roughly from Rome south: Brambilla *et al.* in press), or as a migrant of unknown origin on passage. The alternative solution, mooted by Roselaar (*in* Shirihai *et al.* 2001), is to place *moltonii* in the synonymy of the nominate, based on the Italian origin of Pallas's syntypes. This would probably create a less clear understanding of the rearrangement proposed here; would contradict the underparts coloration recorded by Pallas (1764); and imply an arbitrary decision concerning the origin of *cantillans*, considering that more than one race is present on the Italian mainland. Characterisation of southern Italian and Sicilian populations, however, will probably require further taxonomic adjustments and perhaps designation of neotypes.

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Taxonomic status and distribution of Mangrove Black Hawk *Buteogallus* (*anthracinus*) *subtilis*

by William S. Clark

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Mangrove Black Hawk was described, by Thayer & Bangs (1905), as *Urubitinga subtilis*, from two specimens taken on Gorgona Island, off south-west Colombia. The adult appeared very similar to adult Common Black Hawk *Buteogallus anthracinus* but was smaller, had a larger white patch at the base of the outer primaries, and the ground colour of the secondaries was bright cinnamon-rufous (the secondaries of adult Common Black Hawk are greyish, often tinged rufous). Swann (1920) erroneously listed *subtilis* as a race of Great Black Hawk *B. urubitinga*; subsequently, he corrected this by listing it as a race of Common Black Hawk (Swann 1922, 1930). Chapman (1926) likewise treated *subtilis* as a race of Common Black Hawk and gave its range as 'southern Ecuador to eastern Panama.' Peters (1931), however, considered it a separate species and gave the range as

Ecuador to El Salvador in mangroves along the Pacific coast, without explanation or citation for the extension in range or change in taxonomy. Aldrich & Bole (1937), in contrast, concluded that only Common Black Hawk occurs in Panama. Most subsequent authors have considered *subtilis* a race of *B. anthracinus* (e.g., Hellmayr & Conover 1949, Friedmann 1950, Amadon 1961), but Monroe (1963) treated it specifically and even described a new subspecies, *B. s. rhizophorae*, though others were doubtful of this (e.g., Wetmore 1965, Brown & Amadon 1968, Land 1970, Mayr & Short 1970, Meyer de Schauensee 1970, Blake 1977) and continued to treat *subtilis* subspecifically. Amadon (*in* Stresemann & Amadon 1979) reversed his earlier opinion (Amadon 1961, Brown & Amadon 1968) that *subtilis* was a race and treated Mangrove Black Hawk as a polytypic species with three subspecies, without presenting any justification for his change of opinion, but later wrote (Amadon 1982) that it was based on differences in morphology and habits. The American Ornithologists' Union Check-list Committee (1983) (which included Monroe) followed Stresemann & Amadon (1979) and gave its range as mangroves on the Pacific coast from southern Mexico to northern Peru, and the range of Common Black Hawk as the adjacent Middle American mainland and mangroves on the Caribbean coast. Still there was disagreement and many authors expressed doubts over this arrangement (e.g., Hilty & Brown 1986, Palmer 1988, Ridgely & Gwynne 1989, Stiles & Skutch 1989, Schnell 1994, Howell & Webb 1995, Ridgely & Greenfield 2001). Thiollay (1994) and Ferguson-Lees & Christie (2001) also treated *subtilis* specifically, though the former regarded such status as uncertain.

Based on field work in many countries and research in several museums, I have found that birds with the characters of *subtilis* described by Thayer and Bangs (1905) occur only on the Pacific coast of South America, and that they differ from *B. anthracinus* in just a few characters. Mangrove Black Hawk is best considered a race of that species.

Methods

I examined all adult specimens of Common and Mangrove Black Hawks in the collections of the American Museum of Natural History (AMNH), New York (n=75), the Natural History Museum (NHM), Tring (n=37), and the National Museum of Natural History (NMNH), Washington DC (n=30). I recorded the following plumage characters for those in AMNH and NHM: size of the white patch at the base of the three outermost primaries, amount of rufous on the upper secondaries, amount of rufous on the undersides of the secondaries and inner primaries, and amount of rufous and buff feather fringes on the nape, breast and tarsal feathers. I scored the secondaries, above and below, for the amount of rufous on 19 adults from Panama in the NMNH, and measured the wing-chord of all specimens in the other two institutions.

I have observed both taxa in mangroves on opposite coasts of Panama, in mangroves in Belize, Ecuador, Guatemala, Mexico and Venezuela, and in other

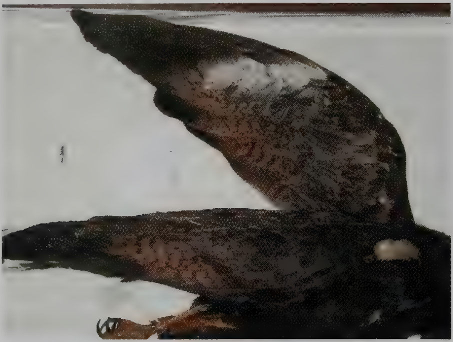

Figure 1. Two adult *subtilis* specimens from Ecuador showing the strong rufous wash on the uppersides of the secondaries on one specimen and the strong rufous wash on the undersides of the secondaries and large white patch on the undersides of the outer primaries on the spread-wing specimen (William S. Clark, American Museum of Natural History, New York)

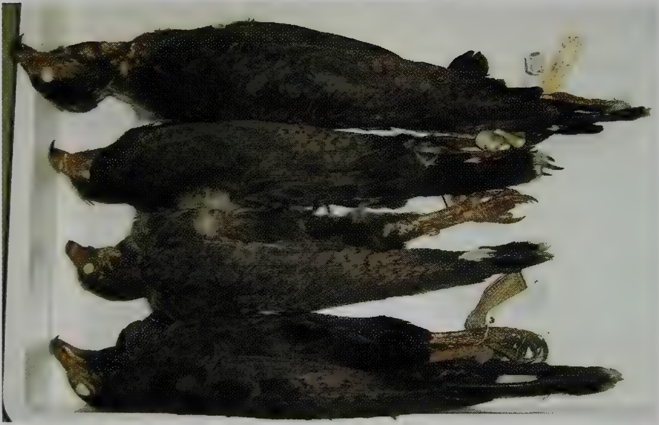

Figure 2. Three adult specimens of *subtilis* from the Pacific coast of South America (Peru, Colombia and one mislabeled 'Mexico') and a fourth from Coiba Island, Panama (). Note the strong rufous wash on the uppersides of the secondaries. All also have large white patches at the bases of the undersides of the outer primaries (William S. Clark, Natural History Museum, Tring)

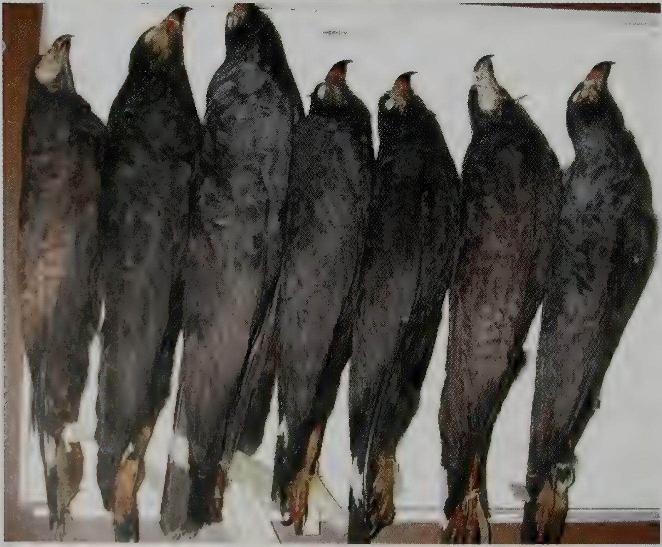

Figure 3. Comparison of the rufous patch on the upperwings of Common Black Hawks. Only the *subtilis* specimen from Ecuador (extreme left) shows the rufous patch on the uppersides of the secondaries. None of the other adults from outside of the range of *subtilis* shows this strong rufous patch (William S. Clark, American Museum of Natural History, New York)

TABLE 1

Rufous wash on the undersides of the secondaries of specimens of adult Common Black Hawks *Buteogallus anthracinus* in the American Museum of Natural History, New York (*n*=75) and the Natural History Museum, Tring (*n*=37).

Country	**Strong**	**Medium**	**Noticeable**	**Faint**	**None**
Pacific coast of South America (*subtilis*)	7				
Panama	2	2	5	6	1
Colombia/Venezuela	1	7	4		
St Vincent, West Indies	3	2	1		
Costa Rica	3	5	2		
Guatemala/El Salvador	2	16	2		
Mexico	3	19	16		
Arizona	2	1			

TABLE 2

Wing-chords of specimens (mm) of adult Common Black Hawks *Buteogallus anthracinus* in the American Museum of Natural History, New York (*n*=75) and the Natural History Museum, Tring (*n*=37).

Country	**Males (*n*)**	**Females (*n*)**
Pacific coast of South America (*subtilis*)	320–336 (4)	346–359 (3)
Panama	331–359 (6)	347–365 (10)
Colombia/Venezuela	350–355 (5)	363–374 (7)
St Vincent, West Indies	353–363 (4)	377–380 (2)
Costa Rica	366–373 (5)	372–395 (5)
Guatemala/El Salvador	350–367 (10)	372–393 (9)
Mexico	342–372 (13)	375–420 (26)
Arizona	370 (1)	396, 397 (2)

habitats in Central America, Mexico, Texas and Arizona and noted their plumages and vocalisations.

Results

All adults from the Pacific coast of South America, between northern Colombia and northern Peru, have bright rufous on their secondaries and inner primaries and larger white patches at the base of the outer primaries (Figs. 1–2, Table 1), and are slightly smaller than adults from elsewhere (Table 2). These are the characters of *subtilis* described by Thayer & Bangs (1905). They differ from adults from the entire range of Common Black Hawk by these characters. All adult *anthracinus* examined, from Arizona south through Middle America to the north coast and mountains of Colombia and Venezuela, and the Caribbean, are essentially alike, with some individual variation but no consistent geographic variation (Fig. 3, Table 1). No plumage differences were found between mangrove-inhabiting hawks from the Pacific and Caribbean coasts of Central America. Two adults from Panama (AMNH 136410, NHM 1925.12.22.443) are identical to specimens of *subtilis* from South America, with bright rufous secondaries and large white primary patches, and were taken on the Pacific coast of Darién, near the border with Colombia, and on Coiba Island (though this locality is perhaps doubtful, as the original label is missing). Specimens of adult *anthracinus* from Panama show intergrade characters; of 19 adults in NMNH, nine had noticeable rufous on the upper secondaries and ten had no rufous, but most showed rufous on the underside of the secondaries.

Vocalisations of adults, *anthracinus* from Arizona and both coasts of Panama, and *subtilis* from Ecuador, sound identical to my ear. A sonogram of the latter, the only known recorded vocalisation of this taxon, had too much background noise to be readily analysed.

Discussion

Before considering its taxonomic status, I address two important questions concerning *subtilis*. What are its distinguishing characters and what is its range? In response to the first query, as stated above, *subtilis* is distinguishable by the characters presented by Thayer & Bangs (1905). Concerning this taxon's range, specimens exhibiting the characteristics described by Thayer & Bangs (1905) occur only on the Pacific coast of South America from northern Colombia to northern Peru (except for two from adjacent Panama).

Monroe (1963, 1968) used only size (wing-chord) and no biological or behavioural information to describe the Mangrove Black Hawk and its three subspecies (*subtilis*, *bangsi* and *rhizophorae*). In justifying the race *rhizophorae*, Monroe (1963) stated that it differed from all adults of *anthracinus* by its lack of rufous wash on the undersides of the secondaries and from southern races of *subtilis* by its grey rather than rufous mottling to the inner webs of the secondaries. However, he was mistaken, because some adults from various parts of the entire range lack any rufous on the secondaries (Table 1). He wrote that both Mangrove and Common Black Hawks occur in mangroves on the Pacific coast of Central America but failed to explain how two 'species' that have identical plumages, voices and feeding habits, and differ only in size, do not interbreed. Size variation in these taxa is best explained by selection according to Bergmann's Rule and for smaller size by inhabiting mangroves. Those occurring in mangroves consume mainly crabs and are thought to be more successful in pursuing them amongst the mangrove roots by being smaller and more agile (Amadon 1961). It is possible for two species of *Buteogallus* to be syntopic in coastal mangroves, because Rufous Crab Hawk *B. aequinoctialis* and Common Black Hawk are syntopic in coastal eastern Venezuela to northern Guyana (Hilty 2003, Ferguson-Lees & Christie 2001). However, these species differ greatly in plumage and size.

Amadon (1961, *in* Brown & Amadon 1968) discussed the reasons why he doubted that *subtilis* was a species and why he considered it a race of *B.*

anthracinus. It is difficult to understand what made him reverse his opinion and elevate *subtilis* to specific status (Stresemann & Amadon 1975), because he presented neither explanations nor rebuttals to his and other authors' arguments as to the rationale for considering it a subspecies. He, like Monroe (1963, 1968), presented no information on differences in behaviour and biology sufficient to treat these sympatric taxa as species. He made his taxonomic decision despite the contrary opinions of many authors (e.g., Aldrich & Bole 1937, Dickey & van Rossem 1938, Hellmayr & Conover 1949, Friedmann 1950, Slud 1964, Wetmore 1965), all of whom advocated treatment of *subtilis* as a race of Common Black Hawk.

Peters (1931) extended the known range of *subtilis* (previously only the Pacific coasts of Colombia and Ecuador) to El Salvador for reasons not given. His basis is unclear, because I have found no specimens of *subtilis* from the Pacific coast of Central America except for the two from Panama mentioned earlier. An adult *subtilis* in NHM is labeled only 'Mexico' (NHM 1850.1.31.138). Because no other Mexican adult specimens have the characters of this race it is most likely that this is a mistake in labeling. It was collected during the 1840s Kellett & Wood expedition, which also visited other locations along the Pacific coast of the Americas, including Gorgona Island, where the first specimen of *subtilis* was collected. As the original label on this specimen is missing (R. Prŷs-Jones pers. comm.), the collecting locality is in doubt. This apparently mislabeled specimen could offer one reason for the confusion as to the taxonomic status and distribution of *subtilis*.

The extremes of variation in wing-chord measurement amongst adult Common Black Hawks of all subspecies by sex is less than 15% for the smallest (*subtilis*) (320 mm) to the largest mountain-dwelling males (373 mm) and less than 18% for the smallest (*subtilis*) (346 mm) and largest mountain-dwelling females (420 mm) (Table 2). This variation is comparable to that in other species, e.g., Eastern Red-tailed Hawk *Buteo jamaicensis borealis*, in which adult male wing-chords (*n*=25) varied 15% (337–396 mm), and adult females (*n*=27) varied 13% (370–427 mm) (Friedmann 1950).

Hellmayr & Conover (1949) wrote with regards to Panama 'with thirty specimens in adult plumage before us we cannot make out a case for recognizing either *cancrivorus* or *subtilis*.' Wetmore (1965) thought that all black hawks in Panama were *anthracinus*, questioning the validity of the forms *bangsi* (sometimes ascribed to the *subtilis* group) and *utilensis*. Blake (1977) presented a clear discussion of the taxa involved and properly described the range of *subtilis* as the Pacific coast of South America, and concluded that the two taxa constitute one species, *B. anthracinus*. More recently, Ridgely & Gwynne (1988) wrote concerning the situation in Panama, 'as the two [*subtilis* and *anthracinus*] are so similar morphological and behaviorally, we remain less than convinced that two species are indeed involved.' Stiles & Skutch (1989) stated 'at least in Costa Rica, mangroves are inhabited by long-, medium-, and short-winged birds (no evidence of discontinuity in wing-length), and to date we can discern no diagnostic differences in color, pattern, voice, behavior, or other characters between Caribbean and Pacific coast or inland birds… we prefer to consider *subtilis* as conspecific with *anthracinus*,' whilst for Mexico Howell & Webb (1985) remarked 'We see no reason to consider *subtilis* as other than a mangrove-inhabiting ssp of Common Black Hawk. Voice and behavior are very similar and many *anthracinus* on the Atlantic Slope live in mangroves, where, in the manner of *subtilis*, they run after crabs on the beaches and mud-flats.' Some years later, Ridgely & Greenfield (2001), commenting with respect to Ecuador, stated 'We do not find evidence for considering *B subtilis* as a separate species persuasive and thus opt to consider it with *B. anthracinus*.'

An egg taken from a black hawk nest in mangroves on the Pacific coast of Costa Rica is indistinguishable from *B. anthracinus* eggs from throughout the range (L. Kiff *in litt.* 2005). The egg and adult are deposited in the collection of the Western Foundation of Vertebrate Zoology in Camarillo, California, USA.

Some adult specimens of *anthracinus* from Panama show a stronger rufous wash on the secondaries than do those from the rest of the range, suggesting gene flow from *subtilis* from South America.

The black hawks from Cuba are considered by Wiley & Garrido (2005) to represent a species-level taxon, Cuban Black Hawk *Buteogallus gundlachi*, based on differences in size, plumage and vocalisations from *anthracinus*. They are small, approximately the size of mangrove-inhabiting nominate birds. Adults differ in being overall more brownish black, lacking the grey cast of nominate adults, and having narrow rufous tips to many body-feathers and upperwing-coverts. They also have a much larger white patch on the underside of the primaries that extends onto the inner primaries. The tail in some adults has a second, narrower white band basal to the broad one. Juveniles appear more like nominate juveniles but have more and narrower tail bands and bars on the tarsal feathers (Wiley & Garrido 2005).

The taxon *subtilis* is restricted to the Pacific coast of South America and differs from all other *anthracinus* only in its slightly smaller size, strong rufous wash on the secondaries and larger white panel at the base of the outer primaries of adults. Because behaviourial and vocal differences from Common Black Hawk have not been documented, and because they intergrade where their ranges meet on the Pacific coast of eastern Panama, I recommend that *subtilis* be considered a subspecies of *B. anthracinus*.

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New records for Guyana, with description of the voice of Roraiman Nightjar *Caprimulgus whitelyi*

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Following Guyana's independence from British rule and the publication of Snyder's *The birds of Guyana*, both of which occurred in 1966, ornithological exploration of the country stagnated for almost 30 years. In 1984 the Smithsonian Institution created the Biodiversity of the Guianas (BDG) Program. Under the auspices of this programme, and in conjunction with the University of Kansas Natural History Museum (KUNHM), ornithological surveys commenced in 1994 and have occurred almost annually since, resulting in several publications documenting new species for the country (e.g., Braun *et al.* 2003, Robbins *et al.* 2003, 2004). Other individuals and organisations have also added to our knowledge of Guyana's avifauna over the past decade (e.g., Mees 2000, Barnett *et al.* 2002, Ridgely *et al.* 2005). Although Braun *et al.* (2000) removed 13 species listed by Snyder (1966), for lack of documentation, the number of bird species known to occur in Guyana has increased by *c.*100 over the past 10 years—from 720 in Snyder (1966) to over 800 today. Here we report two additional new species for Guyana and provide notes on some species poorly known in the country.

The information presented here results from a joint Smithsonian Institution and Louisiana State University expedition, on 12 July–6 August 2004. We visited two localities in west-central Guyana (Fig. 1). The first was near Kopinang Village, in the southern portion of the Pacaraima Mountains (Potaro-Siparuni region; 04°56'N, 59°54'W; 12–28 July). Our base camp was at *c.*850 m elevation; the surrounding landscape was tall forest interspersed with patches of savanna, some quite large (Fig. 2). We were also able to ascend nearby Kopinang Mountain, permitting access to montane forest at 1,400 m. A second camp along the Ireng River (Upper Takutu-Upper Essequibo region; 03°53'N, 59°35'W; 1–6 August) was in gallery forest in the North Rupununi savanna near the eastern edge of the rio Branco drainage. From this camp we were able to survey gallery forest, savanna grassland and light savanna woodland.

Methods

Birds were sampled with shotguns and mist-nets during most days at each camp. Collecting activity was concentrated in the morning hours. Nets were generally opened at dawn and closed in late afternoon. Specimens were preserved as study

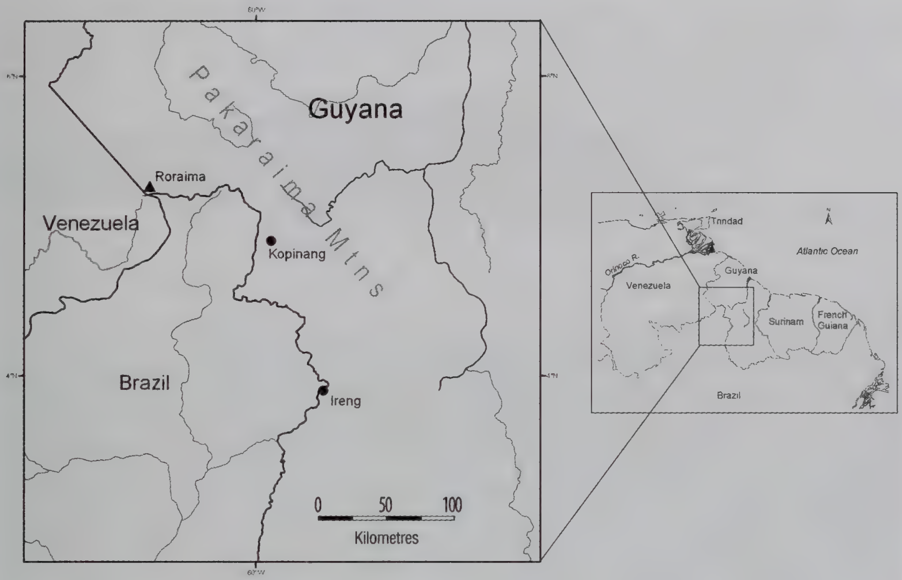

Figure. 1. Map of collecting localities in Guyana.

skins, skeletons or fluid samples in 10% Formaldehyde. Tissue samples were taken from all specimens and preserved in liquid nitrogen. Qualitative observations of the avifauna were made by most observers during morning walks. We used tape-recorders to further document the avifauna at each locality. Specimens are deposited at the National Museum of Natural History, Smithsonian Institution, Washington DC (USNM); Louisiana State University Museum of Natural Science, Baton Rouge (LSUMZ); and the University of Guyana Centre for the Study of Biological Diversity, Georgetown (CSBD). Tape-recordings will be deposited at the Macaulay Library, Cornell Lab of Ornithology, Ithaca, New York.

Species accounts

Notes on selected species of interest from both camps follow. Taxonomy and nomenclature follow the South American Classification Committee of the American Ornithologists' Union (Remsen *et al.* 2006).

SOLITARY EAGLE *Harpyhaliaetus solitarius*

One was observed at our Kopinang camp on 18 July by CMM, soaring over one of the small savannas for *c.*2 minutes. It was recognised by its massive size, dark colour, broad wings and relatively short tail. It also called once, giving a series of repeated short notes (*keer-keer-keer-keer-keer*). This is consistent with published descriptions of this species' voice (e.g., Hilty 2003). Overall, confusion was only

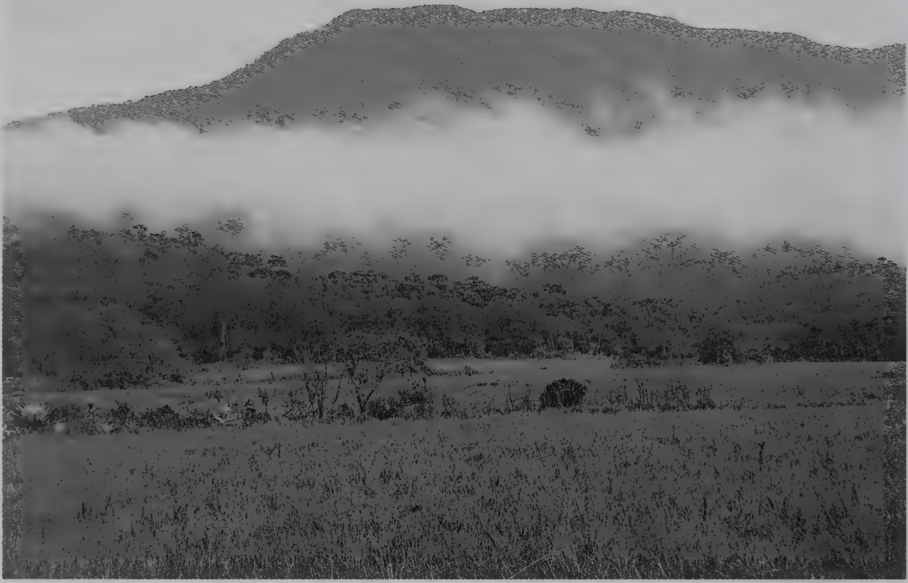

Figure 2. Savanna–forest ecotone near base camp at Kopinang (B. K. Schmidt)

possible with Great Black-hawk *Buteogallus urubitinga.* This bird was considerably larger than a *Buteogallus* and differed from *B. urubitinga* in proportions and voice. The species is generally considered a rare resident of foothill and montane forest in southern Central America, the Andes and the northern coastal cordilleras of Venezuela (Hilty 2003). In the Guiana Shield, there is a Venezuelan record from Cerro de la Neblina (Willard *et al.* 1991) and several for French Guiana (Tostain *et al.* 1992). Ours is the first published observation for Guyana. *H. solitarius* may be a low-density resident of forested hilly regions throughout the Guiana Shield.

BLUE-CHEEKED PARROT *Amazona dufresniana*
Considered Near Threatened by BirdLife International (2004), this was the only *Amazona* parrot observed around Kopinang camp, where it was common. Its range in Guyana is incompletely understood, and it appears absent from large areas. Our observations and data from the wild bird trade suggest that, in Guyana, the species may be commonest in the vicinity of the Pacaraima Mountains (C. K. Hanks pers. comm.). It was reported to be a rare resident of Iwokrama Forest by Ridgely *et al.* (2005) and has also been observed in the Acari Mountains on Guyana's southern border (USNM and KUNHM unpubl. data).

FIERY-SHOULDERED PARAKEET *Pyrrhura egregia*

This species was abundant at all elevations at Kopinang. Specimens were generally in moult. Large groups were frequently observed at fruiting and flowering trees; in particular, it seemed fond of a *Dimorphandra* sp. (Leguminosae: Caesalpinoideae). Indeed, the flowers of this common tree attracted large numbers of birds, especially Tepui Parrotlets *Nannopsittaca panychlora*, Green Honeycreepers *Chlorophanes spiza* and Red-legged Honeycreepers *Cyanerpes cyaneus. P. egregia* was observed infrequently up to 1,500 m on Mt. Roraima in March–April 2001, and the species' overall status in Guyana is unclear. Despite this, 120 individuals may be legally exported from Guyana annually for the international bird trade (Duplaix 2001).

VERMICULATED SCREECH-OWL *Megascops guatemalae*

Encountered occasionally at our Kopinang site. BJO obtained a recording of a singing bird, at dawn on 19 July, at 850 m, and heard another on a different day, *c.*90 minutes before sunrise, at 1,200 m. These individuals presumably represent the subspecies *M. g. roraimae*, first reported for Guyana by Braun *et al.* (2003); our records constitute a small range extension for this taxon.

RORAIMAN NIGHTJAR *Caprimulgus whitelyi*

A male was tape-recorded and collected, on 18 July, in an area of savanna with scattered *Curatella americana* trees, near our Kopinang base camp, at 850 m (LSUMZ 175345). An additional female-plumaged specimen was preserved as a fluid sample (USNM 632437). The species appeared to be a low-density resident of the patchy savannas that characterised the Kopinang site. Five were detected in three large savanna areas near our camp, where they were observed primarily in the vicinity of forest edges and bush islands. Birds were either flushed from the ground or responded to playback before retreating to dense cover. They were extremely difficult to find and observe, in part because they only called for a few minutes at

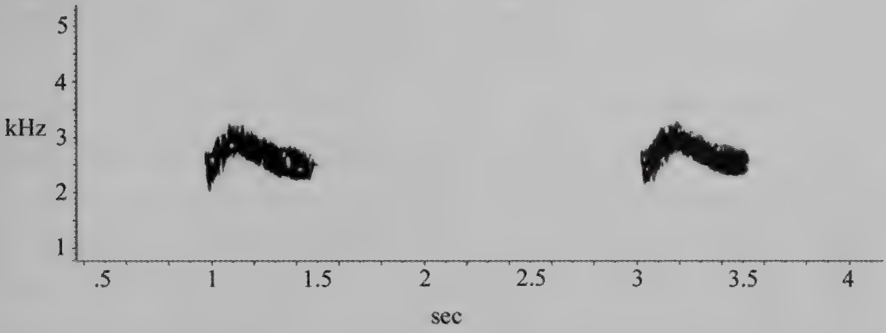

Figure 3. Sonogram of vocalisation of *Caprimulgus whitelyi.* The recording was made with a Sony TCD5-Pro II cassette recorder and Sennheiser ME-66/K5 microphone; the sonogram was generated using RAVEN 1.2 (Charif *et al.* 2004).

first light and were unresponsive to playback over long distances. We heard one call type: a burry *hreeer*, rising then falling in pitch, and repeated at intervals of 1–2 seconds (Fig. 3). *C. whitelyi* is similar in plumage to the sympatric Blackish Nightjar *Caprimulgus nigrescens* and is considered by Cleere (1998, 1999) to form a superspecies with it. However, vocalisations of the two are quite different, and they may not be each others' closest extant relatives. *C. nigrescens* is widespread in the Guiana Shield, but we did not encounter it at Kopinang. We present a sonogram of the first known recording of *C. whitelyi* (Fig. 3); this recording corresponds to the aforementioned specimen at LSUMZ. Our specimens are the first records for Guyana of this elusive and poorly known species. The elevation at which we observed these birds (850 m) is over 400 m lower than the minimum elevation given by Cleere (1999).

GREEN-TAILED JACAMAR *Galbula galbula* / RUFOUS-TAILED JACAMAR *Galbula ruficauda*

These two species were syntopic in gallery forest at our Ireng River camp. The first specimens of the latter species for Guyana were collected, in 2000, near the Takutu River, along the Brazilian border south-west of our field site (USNM and KUNHM unpubl. data). *G. galbula* occurs throughout the Guianas and replaces *G. ruficauda* east of the rio Branco drainage. Extensive field work by Robbins *et al.* (2004) did not reveal evidence of syntopy along the Takutu and Ireng rivers. However, Haffer (1974) mentioned that they are sympatric over much of Roraima, Brazil. Moskovits *et al.* (1985) reported *G. galbula* west of Boa Vista, at least 170 km south-west of our Ireng River site. At our camp, *G. galbula* appeared to be commoner than its congener. The Brazilian records and our observations suggest that *G. galbula* and *G. ruficauda* do not replace one another abruptly across the rio Branco drainage, but instead maintain a rather broad transition zone within which they are at least locally syntopic. Further investigation of the distribution of jacamars in adjacent Brazil could provide more information on the nature of this transition zone. We could not infer any evidence of hybridisation, interspecific territoriality or habitat segregation during our short visit. Specimens of both species were obtained (*G. galbula*: USNM 632503, 632504, 632774; *G. ruficauda*: USNM 632667, 632845).

WHITE-BELLIED PICULET *Picumnus spilogaster*

Fairly common in gallery forest along the Ireng River, where several specimens were taken (USNM 632482, 632585, 632767), *P. spilogaster* is known from Roraima, Brazil (Winkler & Christie 2002) and supposedly occurs 'eastwards through Guyana' (Winkler *et al.* 1995). Our experience contradicts this supposition, as much of the country's interior is covered with tall humid forest inhabited by Golden-spangled Piculet *P. exilis*. All *Picumnus* specimens taken by recent researchers in the gallery forests and savanna woodlands of south-west Guyana have been of White-barred Piculet *P. cirratus* (USNM and KUNHM unpubl. data). Recent field surveys suggest that *P. spilogaster* occurs primarily in the coastal region east of the Essequibo River, where it is common; there are no modern specimens from the interior. The occurrence of this taxon in the gallery forests of south-west Guyana provides additional support for the hypothesis that coastal and interior savanna avifaunas were connected in the recent past (Silva 1998, Robbins *et al.* 2004; see Discussion).

HOARY-THROATED SPINETAIL *Synallaxis kollari*
A scarce or at least inconspicuous resident in gallery forest along the Ireng River; our one specimen (USNM 632517), taken in a dry scrubby area adjacent to savanna at the edge of a narrow gallery forest, was our only observation despite extensive effort using playback. Robbins *et al.* (2004) also reported finding this species at low density in this region.

SHARP-TAILED STREAMCREEPER *Lochmias nematura*
Early specimen records of *L. nematura* from Guyana were subsequently considered to have been taken in Venezuelan territory (Snyder 1966). The species was recently reported for Guyana by Barnett *et al.* (2002) based on observations from Mt. Kowa, *c.*30 km east-southeast of Kopinang. We observed *L. nematura* on several occasions beside a small stream at 1,400 m on Kopinang Mountain. A specimen collected on 24 July (LSUMZ 175389; smooth ovary 4 × 3 mm, bursa of Fabricius 3 × 3 mm, skull 0% ossified) is the first for the country.

OLIVACEOUS WOODCREEPER *Sittasomus griseicapillus*
Fairly common at higher elevations (1,200–1,400 m) on Kopinang Mountain, with one observation at 850 m, this species was a frequent member of mixed-species flocks. The range of this species in Guyana is poorly understood. It appears to occur over much of western Guyana, but details are generally lacking (see Barnett *et al.* 2002). *Sittasomus* has been recorded from the extreme south (USNM and KUNHM unpubl. data) and in mature forest on islands in the Essequibo River (Ridgely *et al.* 2005), but is unknown from the eastern half of the country and has never been recorded in Suriname (Haverschmidt & Mees 1994). Specimens collected at 1,400 m on Kopinang Mountain (LSUMZ 175363, 175364) agree with the characters of *S. g. axillaris,* the same subspecies found in the neighbouring north-east Amazonian lowlands.

PLAIN ANTVIREO *Dysithamnus mentalis*
Common at and above 1,000 m on Kopinang Mountain, but conspicuously absent at lower elevations, *D. mentalis* was occasionally observed to follow understorey mixed-species flocks. This species is known from few localities in Guyana; it occurs in the Acari Mountains on Guyana's southern border (USNM and KUNHM unpubl. data), but was not found during an extensive survey of Mt. Roraima (Braun *et al.* 2003). It does not appear on the Potaro Plateau list of Barnett *et al.* (2002), nor was it found in Iwokrama Forest by Ridgely *et al.* (2005).

PLAIN-WINGED ANTWREN *Myrmotherula behni*
Fairly common above 1,200 m on Kopinang Mountain, our three specimens (USNM 632469, 632473; LSUMZ 175410) may be the first for the country, and certainly represent the first modern specimens and genetic material from Guyana. Though specimens of *M. behni* have been reported from several localities in Guyana (Cory & Hellmayr 1924, Snyder 1966), these were either misidentified females of Long-winged Antwren *M. longipennis* or were collected in Venezuelan territory. At Kopinang, pairs were regularly seen and heard in the subcanopy and understorey, at 1,200–1,400 m. They often followed mixed-species flocks, often with Chapman's Bristle-tyrants *Phylloscartes chapmani*, Two-banded Warblers *Basileuterus bivittatus* and Plain Xenops *Xenops minutus*. *M. behni* appeared to replace *M. longipennis* abruptly at 1,200 m. No tape-recordings were obtained, but contact calls and behaviour were similar to *M. longipennis*.

RIO BRANCO ANTBIRD *Cercomacra carbonaria*
An uncommon, local resident at the Ireng River site, where we heard it singing sporadically in gallery forest. It seemed to be restricted to taller, wider sections of forest with dense thickets and vine tangles, i.e., it was absent from areas where cattle had extensively grazed the understorey or where the forest was less than *c.*50 m wide. We used playback to sample extensive areas of the river, but males did not always respond and it was difficult, therefore, to judge accurately the density of the population. We only observed one female, but we suspect that the species lives in pairs in dense vegetation, much like other *Cercomacra* (Morton *et al.* 2000). We collected four specimens, which represent the first for Guyana (USNM 632490–92; LSUMZ 175414).

SHORT-TAILED ANTTHRUSH *Chamaeza campanisona*
Fairly common at 1,400 m on Kopinang Mountain; two specimens were obtained (USNM 632452, LSUMZ 175431) which match the characters of *C. c. fulvescens*, the subspecies of adjacent tepuis. Our records constitute the first specimen records for Guyana since the species was reported in Snyder (1966), who listed it from the Merume Mountains and Mt. Ayanganna. *C. campanisona* was not observed by Braun *et al.* (2003) on Mt. Roraima, but it was found on the crest of the Iwokrama Mountains by Ridgely *et al.* (2005). Barnett *et al.* (2002) also had a sight record from Mt. Kowa. This species, inconspicuous when not singing, is perhaps widespread at higher elevations in the Pacaraima Mountains.

YELLOW-LEGGED THRUSH *Platycichla flavipes*
Uncommon at 1,400 m on Kopinang Mountain, where it was observed feeding on fruiting Melastomataceae, and several specimens, all juveniles, were taken, the first for the country (USNM 632458, 632756, 632762). A singing bird seen and tape-recorded on Mt. Roraima in 2001 (Braun *et al.* 2003) was the only previous Guyana record.

RUFOUS-COLLARED SPARROW *Zonotrichia capensis*
Uncommon around our Kopinang camp, where we collected several specimens (USNM 632649, 632650, 632706, 632707, 632782), the first to be taken by the Smithsonian BDG Program in almost ten years of field surveys in Guyana. The range of this species in Guyana appears to be limited to savanna patches in the Pacaraima Mountains, and possibly scrubby habitats on the flat tops of those mountains. Although abundant in most parts of its vast range, *Z. capensis* seems much scarcer in the Guiana Shield.

TWO-BANDED WARBLER *Basileuterus bivittatus*
One of the most conspicuous birds at upper elevations on Kopinang Mountain, where it was observed down to *c.*1,000 m. Family groups formed the nucleus of understorey mixed-species flocks; all such flocks that we observed above 1,200 m contained a group of *Basileuterus.* We sometimes observed family groups foraging alone, especially below 1,200 m where many small highland passerines were absent. Overall, *B. bivittatus* appeared much commoner on Kopinang Mountain than on Mt. Roraima. We believe that the prevalence of conspicuous family groups on Kopinang only partially accounts for the difference; e.g., *B. bivittatus* was not a nuclear species in mixed-species flocks on Roraima, and indeed was rarely encountered at all during our six-week survey in 2001.

TROUPIAL *Icterus icterus*
Common along the Ireng River and was singing persistently. It was also observed away from the river in open woodland on hillsides near our camp. *I. icterus* was previously thought rare and local in Guyana, occurring no further east than the Ireng and Takutu rivers. However, there are recent reliable sight records from as far east as Annai (C. Edwards pers. comm.), suggesting that it is more common and widespread in the Rupununi savanna than previously recognised.

Discussion

We recorded 229 species at our Kopinang site. The avifauna represented a diverse mix of savanna, lowland forest and montane forest species. Kopinang Mountain is part of the Wokamung Tepui massif and rises to *c.*1,600 m. We frequently observed such montane species as Roraiman Antwren *Herpsilochmus roraimae*, Tepui Greenlet *Hylophilus sclateri* and Golden-tufted Mountain-grackle *Macroagelaius imthurni* in forested areas around our base camp at 850 m. At this elevation we also mist-netted many Orange-bellied Manakins *Lepidothrix suavissima* and Scarlet-horned Manakins *Pipra cornuta*, two common species of higher elevations in the tepui region. Several tepui endemics were found above 1,200 m, including Tepui Spinetail *Cranioleuca demissa*, White-throated Foliage-gleaner *Automolus roraimae*, Plain-winged Antwren *Myrmotherula behni* and Chapman's Bristle-tyrant *Phylloscartes chapmani.* Most of these were associated with mixed-species foraging flocks and were not found below 1,200 m. However, overlap was considerable between the lowland and highland components of the avifauna on Kopinang Mountain, primarily because many lowland species were common up to at least 1,400 m, far higher than they normally occur elsewhere in their ranges. Some common lowland species at this elevation included White-plumed Antbird *Pithys albifrons*, Scale-backed Antbird *Hylophylax poecilinotus*, Chestnut-rumped Woodcreeper *Xiphorhynchus pardalotus* and Plain Xenops *Xenops minutus.*

Two of us (BJO, CMM) participated in an expedition to Mt. Roraima in March–April 2001 (see Braun *et al.* 2003), and we noted many avifaunal differences between Kopinang Mountain and Mt. Roraima. In general, the avifauna at similar elevations on Mt. Roraima contained a much lower proportion of lowland species, and many more highland species, than we observed on Kopinang. Species regularly encountered in the wet, moss- and epiphyte-laden north slopes of Roraima that were not encountered on the drier southern slopes of Kopinang included Red-banded Fruiteater *Pipreola whitelyi*, Roraiman Barbtail *Roraimia adusta*, Streak-backed Antshrike *Thamnophilus insignis*, Scaled Antpitta *Grallaria guatemalensis*, Slate-crowned Antpitta *Grallaricula nana* and Roraiman Flycatcher *Myiophobus roraimae. Roraimia adusta* was one of the most frequently captured birds in mist-nets at 800 and 1,300 m on Roraima during our visit, and thus its apparent absence from Kopinang was mysterious. The north and east slopes of the tepuis intercept moisture-laden trade winds from the Atlantic, and it could be expected that these slopes might have higher rainfall and different plant communities than slopes facing away from the trade winds (D. Clarke pers. comm.). Though rain was frequent on Kopinang Mountain during our visit, the relative lack of epiphytic growth suggests that either annual precipitation levels are comparatively low or that rainfall is highly seasonal. The differences that we observed in the avifaunas of the two mountains suggest that geographic and elevational ranges of montane bird species in the tepui region may be more complex than currently acknowledged. Historical, structural, climatic and elevational influences on the occurrence and abundance of highland tepui birds represents a fertile area for future research.

The narrow, dense gallery forests along the Ireng and Takutu rivers harbour an avifauna unique in Guyana. We observed 128 species over a six-day period near our camp on the Ireng River. Two poorly known species, Rio Branco Antbird *Cercomacra carbonaria* and Hoary-throated Spinetail *Synallaxis kollari*, only occur in gallery forests of the rio Branco drainage, which lies mostly within Roraima, Brazil. As far as is known, these two species do not occur east of the Guyana/Brazil border. As previous researchers have noted (e.g., Mees 2000, Robbins *et al.* 2004), the avifauna in savanna gallery forests of south-west Guyana appears to have strong affinities with that of the Guianan coastal plain rather than with the intervening forested regions of the country. Species common in gallery forest of the Upper Takutu–Upper Essequibo region include Straight-billed Woodcreeper *Xiphorhynchus picus*, Black-crested Antshrike *Sakesphorus canadensis*, Mouse-colored Tyrannulet *Phaeomyias murina*, Pale-tipped Inezia *Inezia caudata*, Brown-crested Flycatcher *Myiarchus tyrannulus*, Yellow-breasted Flycatcher

Tolmomyias flaviventris, Ashy-headed Greenlet *Hylophilus pectoralis*, Greyish Saltator *Saltator coerulescens* and Yellow Oriole *Icterus nigrogularis.* All are common along the coast and some (e.g. *Hylophilus pectoralis*) are among the commonest birds in coastal mangrove forests. However, they appear to be absent from much of the interior of Guyana, which is still mostly covered with contiguous lowland evergreen forest. The strong similarity between the coastal and interior gallery forest avifaunas probably reflects the influence of either historical population connectivity related to periods of expansion of savanna habitats in South America (Haffer 1974) or some recent dispersal by more vagile taxa, or a combination of these factors. More study is needed to clarify the relationships of these apparently allopatric populations.

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The status of Chattering Cisticola *Cisticola anonymus* in Upper Guinea

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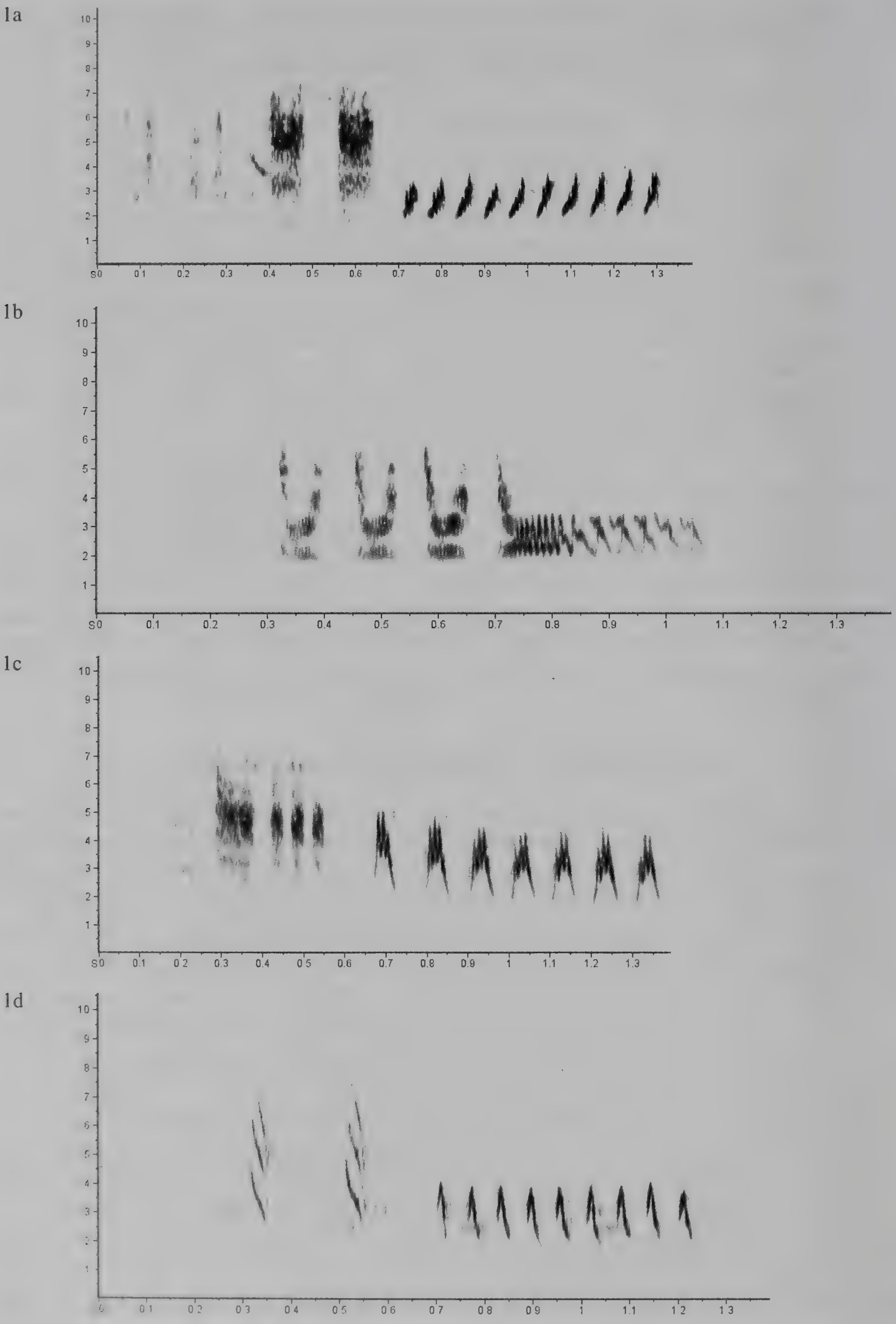
Chattering Cisticola *Cisticola anonymus* is common at forest edges and clearings in Lower Guinea, well known from Nigeria east to Central African Republic and south through Congo to Angola (Dowsett & Forbes-Watson 1993). However, its status in Upper Guinea has been unclear for many years with a longstanding question mark over records from Sierra Leone and Ghana. Most authorities (Bannerman 1939, 1953, Lynes 1930, 1932, 1934, Mayr & Cottrell 1986) do not include Upper Guinea in the range, whereas Sharpe (1883) and Mackworth-Praed & Grant (1973) included Ghana, and Bannerman (1921, though see below) and Urban *et al.* (1997) Sierra Leone. The latter was somewhat circumspect as to the precise identity of birds in Sierra Leone, which uncertainty was repeated by Borrow & Demey (2001) and Ryan (2006). Other commentators concluded earlier records from Sierra Leone to be unconfirmed and thus unacceptable (Dowsett & Forbes-Watson 1993) or doubtful so perhaps best deleted (Dowsett & Dowsett-Lemaire 1993). The first unequivocal claim from Sierra Leone (Allport *et al.* 1989) lacks any supporting details. Despite such disagreement, it seems that *C. anonymus* does occur in Upper Guinea, in Sierra Leone, but not in Ghana. Here I clarify the published and specimen record, and provide details of field observations from Sierra Leone.

The published and specimen record

Debate has partially arisen from confusion over a specimen collected in Sierra Leone in 1920. Two papers appeared in *Ibis* in 1921 reporting *Cisticola rufopileata* from Sierra Leone (Bannerman 1921, Lowe & Bannerman 1921). At the time, this name was in use for *C. anonymus* (though not exclusively so: R. J. Dowsett *in litt.* 2006) and it appears likely that this is what was being referred. The papers were not cited by Lynes (1930, 1932, 1934) who otherwise knew of no record of *C. anonymus* from Sierra Leone, and Bannerman (1939) did not provide subsequent clarification.

The *Ibis* papers both refer to a skin collected by W. P. Lowe on 6 March 1920. The report of Lowe's trip was prepared by Bannerman, with field notes by Lowe, and therein Bannerman listed the record as a first for the country. The specimen is held at the Natural History Museum (NHM), Tring (accession number 1920.6.15.76 and listed as *C. rufopileata* [syn. *C. anonyma* and *C. anonymus*] in the accession register), but is clearly a Singing Cisticola *C. cantans* (see Appendix). On the specimen label the original *rufopileata* is deleted in pencil, and *swanzii* (a subspecies of *C. cantans*) written on the reverse in ink (though not in Lynes' hand). Lynes (1930) referred to a skin of *C. cantans* collected in March, in Sierra Leone, and listed W. P. Lowe as a collector of *C. cantans* skins. However, he provided no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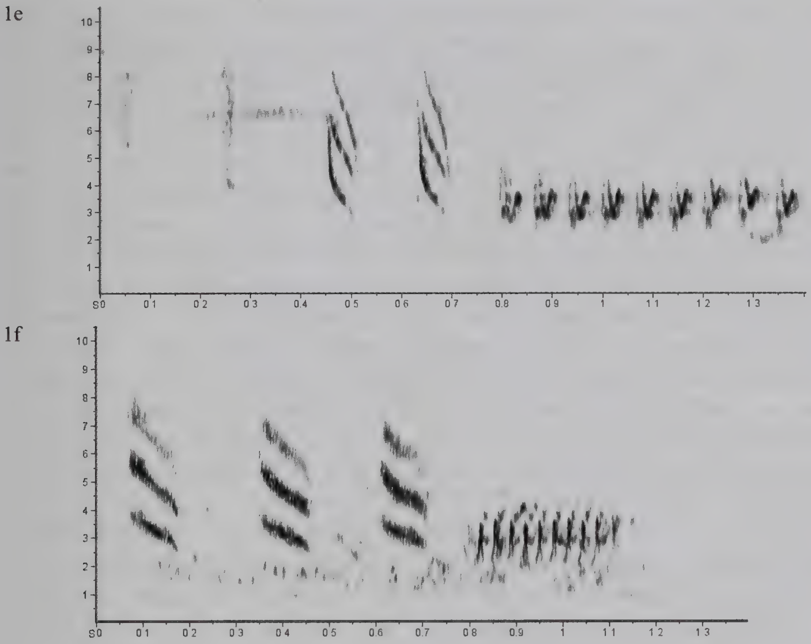

Figure 1. Sonograms of the song of Chattering Cisticola *Cisticola anonymus*. Units are seconds on X axis and kHz on Y axis. a) first cut from Chappuis (2000). This recording sounds most similar to birds in Sierra Leone. b) second cut from Chappuis (2000). The churr in this individual is more rapid than in the others. c) third cut from Chappuis (2000). d) first individual recorded near Kenema, Sierra Leone, August 2006. e) second individual recorded near Pewa, Sierra Leone, September 2005. f) third individual recorded near Pewa, Sierra Leone, September 2005. Sonograms produced in Raven Lite 1.0 (Cornell Lab. of Ornithology).

indication that this was a reidentification, nor did he explicitly correct Bannerman. He also did not mention any *C. anonymus* skins from Sierra Leone.

Since Lynes (1930, cited verbatim in Bannerman 1939) became *the* authority on the distribution of the species for many years, Bannerman's earlier reports were superseded. Dowsett & Dowsett-Lemaire (1993) noted Bannerman's (1921) report but nonetheless concluded that there was no certain record from Sierra Leone. What is clear now is that there never was any specimen of *C. anonymus* from Sierra Leone, making Lynes's (1930) position correct and Allport *et al.* (1989) the first unequivocal claim for the country.

The situation in Ghana is less easily resolved. There are two specimens of *C. anonymus* at NHM (1886.6.24.219, 1886.6.24.220), collected by Maxwell Hyslop. The labels give their location as 'Gold Coast' (i.e. Ghana) with a later annotation of 'probably not, but S. Nigeria', whilst the collector's label states 'West African Coast' and gives the authority as 'Oil Palm Ships'. The skins were originally in the collection of Sir W. Jardine, who (Jardine 1849) referred to their having arrived courtesy of the Liverpool Oil Palm Ships and stated their provenance as the Old Calabar River, in present-day southern Nigeria. Earlier, Jardine (1846) referred to Hyslop's specimens as coming from the Old Calabar and the Bonny rivers, the latter also in southern Nigeria. Furthermore, though Sharpe (1883) was published too early to mention the Jardine specimens, an annotation in the British Museum's copy details two skins of *C. ruficapilla* (a preoccupied name that became *rufopileata* and refers to *anonymus*), collected by Hyslop and from the Jardine collection, from 'Old Calabar'. In sum, strong evidence is available that these specimens are from southern Nigeria and not Ghana. Perhaps Mackworth-Praed & Grant (1973) based the species' range on these skins' labels prior to their being amended. However, Sharpe (1883) also described the range of *C. anonymus* as 'West Africa from the Gold Coast to Gaboon', though his basis is unclear. So there remains an older authority that includes Ghana in the range of *C. anonymus*, but no subsequent records are available (Grimes 1987) despite extensive surveys of suitable habitat (R. J. Dowsett *in litt*. 2006).

Although my analysis eliminates any acceptable record of *C. anonymus* for Sierra Leone and Upper Guinea, those with field experience in the region have been aware for some time of the presence in south-east Sierra Leone of birds matching *C. anonymus*. Allport *et al.* (1989) reported the species in Gola Forest and Urban *et al.* (1997) a personal communication from G. Field relating to the same area. They were, nonetheless, circumspect stating that 'birds *referred* to this species locally frequent SE Sierra Leone' (italics mine). Dowsett & Dowsett-Lemaire (1993) considered the Allport *et al.* (1989) record insufficiently documented, bearing in mind that they were claiming a range extension of *c*.1,500 km, of a difficult-to-identify species, with no supporting details.

Field observations in Sierra Leone

On 29 September 2005 a bird was observed singing from bushes at the edge of wet rice fields *c*.1 km north of the village of Pewa (07°21'N, 11°17'W), Kenema District, and adjacent to the boundary of Gola West Forest Reserve. It was immediately recognised as a *C. anonymus*-type song and brief views confirmed the bird as a medium-sized, plain-backed cisticola. Broadcasting the recording of *C. anonymus* from Chappuis (2000) resulted in a bird responding immediately and flying from a distance of *c*.100 m to within 15 m, permitting clear views and sound-recordings to be made. At least three pairs were noted in the overgrown rice fields.

Habitat

The birds occupied rank growth on the bunds between the wet rice fields, which covered an area of 10–20 ha and were surrounded by farmbush in varying stages of regeneration. There did not appear to be any birds occupying a natural grassy swamp on the opposite side of the road. The swamp lacked the small bushes present around the rice fields.

Behaviour

The birds frequented low vegetation and sang from perches atop the vegetation. Once disturbed by playback, they moved to higher perches where they sang with tails cocked and displayed prominently.

Voice

The song consisted of four types of note. The main phrase started with 1–3 harsh notes, followed by 2–3 higher pitched chirps, and concluded with a fruity rattling churr or trill. The overall phrase was sometimes interspersed with a short churr: *shrit shrit chirip chirip chrrrrrrrrrrr… chrchrchr… shrit shrit chirip chirip chrrrrrrrrrrr*. The final rattling churr was the most distinctive part whilst the timing and composition of the introductory notes varied in speed and length with individuals. The song was similar to Rattling Cisticola *C. chiniana* and the rattling churr reminiscent of Winding Cisticola *C. galactotes*. Sonograms are presented (Fig. 1) of the introductory notes and the characteristic churr for three individuals from south-east Sierra Leone, and compared with recordings from Chappuis (2000).

Description

General. A medium to large grey-brown cisticola with a plain back, whitish underparts, black bill and gape, and rufous-brown crown and upper nape.

Upperparts. Forehead, crown and upper nape dull rufous-brown. Lower nape graded into plain grey (brown-tinged) back. Wing-panel (fringes to the secondaries) did not obviously contrast with back. Upper tail similar to back and had terminal pale spots with slight darkening of the base colour adjacent to the pale.

Underparts. Throat creamy white contrasting slightly with pale greyish wash on breast. Strong grey wash to flanks contrasting with off-white belly. Distinctly rufous thighs.

Face. Darkish lores and an obvious pale supraloral spot that graded into a supercilium fading shortly behind eye. Ear-coverts rather indistinctly coloured but not clearly rufous.

Bare parts. Bill strong and all black; gape all black; orange irides; legs and feet pale, pinkish in tone.

This description matches the skins of *C. anonymus* held at NHM and the illustrations in Lynes (1930) and Ryan (2006). Subsequently, records have come to light from other visiting birdwatchers (I. Sinclair pers. comm., A. Hester *in litt.* 2006) and the species has been found to be quite common at the edges of Gola Forest (E. Klop pers. comm.) and as far north-west as Kenema at least.

Discussion

If these birds are *C. anonymus* we face a quite remarkable situation: despite the gap in its range of *c*.1,500 km, *C. anonymus* was claimed in Sierra Leone on the basis of a misclassified specimen, when over 80 years later, it was found there after all. Given the apparent isolation, it is possible the Sierra Leone population will show racially distinct characters and may even prove to be specifically distinct, though observations do not currently suggest this; a more detailed examination is required. Several other birds are restricted to Upper Guinea (Stattersfield *et al.* 1998), so if this is a distinct population it would not be unique in the region. However, few passerines display such a large gap in their range across their West African distribution. It seems unlikely that the species persists in Ghana or Côte d'Ivoire given the coverage by birdwatchers and surveys in recent years. It is hard to understand why *C. anonymus* is not widespread across the entire Upper Guinea forest zone as it does not appear to occupy very rare or specialised habitat. However, there is a strong possibility that it will be found in western Liberia as the site in Sierra Leone is less than 15 km from the border.

The confusion over the early record is hard to resolve. The specimen bears little resemblance to those of *C. anonymus*, though prior to Lynes (1930) there was much confusion in cisticola taxonomy and nomenclature.

Acknowledgements

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APPENDIX

Description of specimen 1920.6.15.76

Since no formal reidentification has been published of the original specimen from Sierra Leone, it is worth detailing the basis for considering it to be *C. cantans*. The label indicates that it is a male.

General. Much smaller and paler than the larger, darker *C. anonymus* specimens held at NHM. Remiges softer in texture with rounder tips than *C. anonymus*.

Upperparts. Forehead, crown and nape reddish brown. Back and rump grey-brown. Upper tail brown with dark brown-black subterminal spots and contrasting dirty white tips. Closed wing has distinct reddish-brown panel formed by fringes to secondaries.

Underparts. Pale creamy white chin to belly, throat slightly whiter, belly to vent buff, thighs orangey brown.

Head. Cheek warm brown, sides of neck grey, lores not dark, no marked supercilium.

Bare parts. Label indicates upper mandible black, lower mandible greyish, irides pale brown, eyelids pale brown and feet flesh-coloured. The specimen appears to have a slightly yellowish base to the lower mandible.

Measurements. Wing 54 mm, tarsus 20.1 mm.

C. anonymus lacks a reddish-brown wing-panel and has distinctly grey flanks. Singing Cisticola *C. erythrops* has a distinctly rufous face and lacks the reddish-brown wing-panel. Whistling Cisticola *C. lateralis* lacks the contrasting reddish-brown top to the head and wing-panel. Measurements for *C. anonymus* and *C. cantans swanzii* (Urban *et al.* 1997) are shown in Table 1. These reveal that if the specimen is a male then it falls in the range of *C. cantans* and not *C. anonymus*.

TABLE 1

Wing- and tarsus-lengths (mm) of *C. anonymus* and *C. cantans* (Urban *et al.* 1997).

	Wing	*Tarsus*
Male *C. cantans*	52–58	19–22
Male *C. anonymus*	60–63	22–24
Female *C. cantans*	48–52	19–22
Female *C. anonymus*	52–56	21–22

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Existing usage and the names of some Australian birds

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An established convention in zoological nomenclature is that the oldest published scientific name for a taxon has priority. Problems arise when a name in widespread use for a considerable period proves junior to an older name for the same taxon. In the third edition of the *International code of zoological nomenclature* [the 'Code'], Art. 80 required 'existing usage' be maintained until a submission had been made to the International Commission on Zoological Nomenclature (ICZN 1985). 'Existing usage' was defined for cases under consideration by ICZN to be 'the most common current usage', with no further definition of 'common' or 'current' in the glossary. Elsewhere in the same edition, it was noted that stability could be permissibly threatened by introducing an older name, if 'an assertion that the senior name has not been used as a valid name during the immediately preceding fifty years is not contradicted, and ... the junior name has been applied to a particular taxon, as its presumably valid name, by at least 5 different authors and in at least 10 publications during the same period' (Art. 79c).

The fourth edition of the Code (ICZN 1999) came into effect on 1 January 2000 and defines 'existing usage' quite differently. The principle of reversal of precedence (Art. 23) rules that, 'prevailing usage must be maintained when the following conditions are both met: '23.9.1.1. the senior synonym or homonym has not been used as a valid name after 1899 and, '23.9.1.2. the junior synonym or homonym has been used for a particular taxon, as its presumed valid name, in at least 25 works, published by at least 10 authors in the immediately preceding 50 years and encompassing a span of not less than 10 years.' As a result, it is now harder to overturn a senior synonym. McAllan (2006) noted that the subspecies of Lesser Shrikebill from Kadavu (Fiji) had to revert to the senior name *Clytorhynchus vitiensis brunneus* (Ramsay, 1875) rather than *C. v. compressirostris* (Layard, 1876). In this case both conditions of Art. 23 were not met. Even though the older name had not been used since its original publication, the junior name had been used fewer than the requisite 25 times since 1955. In contrast, Scofield *et al.* (2005) demonstrated that in the case of New Zealand Bellbird, the genus-group name *Anthomiza* Swainson, 1837, though senior to *Anthornis* G. R. Gray, 1840, cannot be applied under the current criteria of the Code. In this instance, the junior name has been used many times since 1955. However, if the older name had been used only once as a valid name since 1899, it would have been available.

Thus, it is obvious that the status of older, seemingly unused senior synonyms becomes uncertain, if they were not resolved by a ruling of the ICZN before the fourth edition came into force. In some avian nomenclatural publications of the

1990s it became the vogue to invoke Art. 80 of the third edition to maintain 'existing usage'. Yet in each case, no submission was made to the ICZN to suppress the older synonyms. The question remains as to their validity.

Schodde & Mason (1997) listed several taxa for which they proposed that the older name should be suppressed by the ICZN (all covered here). Upon examination, some of these older names have not been used as valid names since their publication, or at least not since 1899. These include:

- the genus-group name for Topknot Pigeon, *Lophorynchus* Swainson, 1837, senior to *Lopholaimus* Gould, 1841 [not a homonym of *Lophorhynchus* Vieillot, 1816];
- the genus-group name for the Galah, *Cackatto* Lauder & Brown, 1833, senior to *Eolophus* Bonaparte, 1854 [not suppressed in the case of conservation of the related genus *Cacatua*, case 1647 of the ICZN, see Bock & Schodde (1998)];
- the species-group name for the south-east Australian population of Rainbow Lorikeet *Psittacus multicolor* Gmelin, 1788, senior to *Psittacus moluccanus* (Gmelin, 1788); the first revisor was Wagler (1832) who chose *P. multicolor* as the name for the taxon;
- the species-group name for Oriental Cuckoo, *Cuculus striatus* Drapiez, 1823, *C. tenuirostris* Boie, 1828, *C. barbatus* Boie, 1828, and *C. assimilis* Brehm, 1843 (June); all possibly senior to *C. saturatus* Hodgson, 1843, and definitely senior to *C. optatus* Gould, 1845, if the species is split as advocated by Payne (2005);
- the species-group name for Horsfield's Bronze-cuckoo. *Sylvia versicolora* 'Latham, 1802' [*sic*, = 1801], senior to *Cuculus basalis* Horsfield, 1821.

In each case the junior name has been in regular use in the last 50 years and in these instances the principle of reverse of precedence (ICZN 1999: 23.9.1.1 and 23.9.1.2) can and should be applied, with the commonly used junior synonym maintained as the valid name. Nonetheless, the other, apparently unused, senior synonyms referred to by Schodde & Mason (1997) are not so easily dismissed.

***Psittacus hypopolius* J. R. Forster, 1794**, senior to both *Platycercus cooki* G. R. Gray, 1859 (the Norfolk Island population of Red-crowned Parakeet), and *Plyctolophus productus* Gould, 1836 (Gould 1836a; Norfolk Island Kaka). These are the two parrots originally found on Norfolk Island and both junior species-group names are regularly used. Forster's original description notes that the bird was 'einen grossen grünen Papagay' and undoubtedly refers to Red-crowned Parakeet, not the extinct Norfolk Island Kaka. The parakeet is almost all green, whilst the Kaka was a largely brown bird with red rump, belly and undertail-coverts, yellow to orange cheeks, and variable yellow chest (Gould 1865, Calaby 1989, Forshaw & Cooper 2002). This suggests that *Psittacus hypopolius* J. R. Forster, 1794, is the valid name for the Norfolk Island Red-crowned Parakeet. However, the only uses of

P. hypopolius in the 20th century were by Iredale (1937) and Mathews (1946), both of whom applied the name incorrectly to the Kaka, meaning that *P. hypopolius* has not been used in a valid sense since 1899. The principle of reverse of precedence (ICZN 1999: 23.9.1.1, 23.9.1.2) should be applied in this case. *Psittacus hypopolius* J. R. Forster 1794, must be suppressed and the commonly used junior synonym *Platycercus cooki* G. R. Gray, 1859, maintained as the valid name for this population of Red-crowned Parakeet, and *Plyctolophus productus* Gould, 1836, be maintained as the valid name for the Norfolk Island Kaka (Schodde & Mason 1997).

***Columba norfolciensis* Latham, 1801**, was based on two birds, a 'male' and a 'female', reportedly from Norfolk Island. The 'male' appears to be a *Gallicolumba* sp. and the 'female' an Emerald Dove *Chalcophaps indica* (Linnaeus, 1758) (see Hindwood 1965). The identity and thus status of the 'male' is questionable. The name *C. norfolciensis* certainly suggests it was collected at Norfolk Island. A dove similar to a *Gallicolumba* was painted by John Hunter when he was on the island in 1790 or 1791 (now in the National Library of Australia, Canberra, Hunter Sketchbook painting no. 89: Hindwood 1965, Calaby 1989; and incorrectly cited as being in the 'Sydney' series in Holdaway & Anderson 2001). The painting matches Latham's description. Rich *et al.* (1983) and Meredith (1985) also identified subfossil bones of a *Gallicolumba* in deposits from the island. Nonetheless, Schodde & Mason (1997) suggested that, as the description is not conclusively linked with the depicted bird or with the subfossil material, the name *C. norfolciensis* should be suppressed. Another alternative, not offered by Schodde & Mason, is to select either John Hunter's painting or one of the *Gallicolumba* bones from Norfolk Island as a neotype. The original status of Emerald Dove on Norfolk Island is also unclear. It was first recorded there by Hull (1910) who stated that locals believed the species was introduced from the Solomons (where *Chalcophaps indica* only occurs in the Santa Cruz group). Schodde *et al.* (1983) suggested the species was self-introduced to Norfolk Island, possibly in the 19th century (Holdaway *et al.* 2001). However, the description of the 'female' by Latham suggests it was present on the island when Europeans arrived in the 18th century. Emerald Dove was also originally thought to have arrived on nearby Lord Howe Island in the late 19th century, but was certainly there when first visited by an ornithologist, in 1853 (McAllan *et al.* 2004). Whether or not the species was originally present on Norfolk Island awaits confirmation of the age of the subfossil deposits. Although the name *Columba norfolciensis* Latham, 1801, was based on two different taxa, at this stage it cannot be identified definitely with either candidate species. It may thus be considered a *nomen dubium*; not belonging in the synonymy of any species. This may change with a reappraisal of the subfossil material, and a neotype selected to validate the name.

***Columba picata* Latham, 1801**, vs. *Columba melanoleuca* Latham, 1801, for Wonga Pigeon. In this instance, both names were published on the same page of the same work. Mathews (1911) chose *C. melanoleuca* over *C. picata* on the basis of line priority. However, Schodde & Mason noted that the first revisor was Strickland (1843), who chose *C. picata*. *C. picata* (as *Leucosarcia picata*) was consistently used as the valid name through the 19th century and into the 20th century. Although Schodde & Mason (1997) suggested that *L. melanoleuca* was used consistently following Mathews' 1911 paper, *L. picata* was regularly used in *Emu* until 1920. As *Columba picata* Latham, 1801, was regularly used as valid in the 20th century, this precludes invoking the principle of reverse of precedence (ICZN 1999: 23.9.1.1, 23.9.1.2). *Columba picata* Latham, 1801, should be reinstated as the senior synonym for Wonga Pigeon, and *Columba melanoleuca* Latham, 1801, placed in its synonymy.

***Geopelia tranquilla* Gould, 1844**, vs. *Geopelia placida* Gould, 1844, for the Australian population of Peaceful Dove. These names were again published in the same work. Mathews (1908) chose *G. placida* over *G. tranquilla* for the species-group name, but the first revisor was Gould himself, in part XIX of *The birds of Australia* (Gould 1845). Gould chose *G. tranquilla* over *G. placida*, which was consistently followed until Mathews' action. *G. tranquilla* has at various times been applied as a valid subspecies throughout the 20th century until the present (e.g. Goodwin 1970, Frith 1981, Gibbs *et al*. 2001), and as a species in *Emu* until 1944. *Geopelia tranquilla* Gould, 1844, is the senior synonym for the Australian population of Peaceful Dove and its regular valid use to the present precludes invoking the principle of reverse of precedence (ICZN 1999: 23.9.1.1, 23.9.1.2). It should be reinstated as the senior synonym for this population and *Geopelia placida* Gould, 1844, placed in its synonymy.

***Columba argetraea* J. R. Forster, 1794**, vs. *Columba spadicea* Latham, 1801, for the extinct Norfolk Island subspecies of New Zealand Pigeon *Hemiphaga novaeseelandiae*. As noted by Schodde & Mason (1997), *C. argetraea* J. R. Forster, 1794, is senior to *C. spadicea* Latham, 1801. Furthermore, they also pointed out that the name was used by Iredale (1937) and Mathews (1946). In fact, it would be difficult to find 25 uses of *Hemiphaga novaeseelandiae spadicea* since 1955. *Columba argetraea* J. R. Forster, 1794, has been used since 1899, precluding invoking the principle of reversal of precedence (ICZN 1999: 23.9.1.1, 23.9.1.2) and should be reinstated with *Columba spadicea* Latham, 1801, as a synonym.

Schodde & Mason (1999) proposed that a further two taxa should be conserved by the act of suppression of apparently unused senior synonyms by the ICZN.

***Menura superba* Davies, 1802**, vs. *Menura novaehollandiae* Latham, '1802' [=1801], for Superb Lyrebird. Browning & Monroe (1991) determined that the date of Latham's *Supplementum Indicis Ornithologici* to be 1802, based on notice of the publication of the English-language version being announced at the Royal Society on 1 April 1802, and that some copies have the title page hand-corrected to 1802.

Given this, as Latham's work is not accurately dated further, under the Code its date becomes 31 December 1802. One consequence is that *Menura superba* Davies, 1802 (published 5 June 1802), would be the senior name. Schodde & Mason (1999) stated that *M. novaehollandiae* has been used almost universally since 1926, but this is clearly not true. *M. superba* was regularly used in the first 50 years of the *Emu* and other recent usage includes Chisholm (1967), Department of the Interior (1968), Lavery (1969), Chisholm (1974), Slater (1974) and Macdonald (1984). If the date of Latham's Latin-language work is taken as 31 December 1802, *Menura superba* Davies, 1802, would appear available and valid, and the senior synonym for Superb Lyrebird. However, the Code notes that the 'date specified' in the work must be used unless there is contrary evidence (IZCN 1999: 21.1). In the French-language version of this Article the wording is even stronger as it requires 'preuve' [proof], that is, more than just evidence. In this instance there is no concrete proof that the Latin-language edition of the work appeared later than 1801. Until there is proof that Latham's work was published later than 5 June 1802, the Superb Lyrebird must remain as *Menura novaehollandiae* Latham, 1801. Though this argument may seem weak, the same logic is applied to the dating of many works and thus names, e.g., use of the genus-group name *Nymphicus* Wagler, 1832 in preference to *Leptolophus* Swainson, '1833', for Cockatiel *N. hollandicus* (Kerr, 1792) (see Schodde & Mason 1997). Ultimately, the date of Latham's work may require an application to the ICZN.

***Zanthomiza* Swainson, 1837**, vs. *Xanthomyza* Strickland, 1841, for the genus-group name of Regent Honeyeater. The author of *Xanthomyza* is Strickland (1841) rather than Reichenbach (1852), as given by Christidis & Boles (1994). Strickland's use of *Xanthomyza* was to correct transliteration from Greek to Latin, though such changes are invalid under the Code. It was intended that a submission to suppress *Zanthomiza* was to be sent to the ICZN as long ago as 1960 by the Standing Committee on Ornithological Nomenclature of the International Ornithological Conference (Salomonsen 1960), but as no ruling has been published there is no evidence this occurred. In this case, the name in most common usage in 1960, *Zanthomiza*, was erroneously proposed for suppression. *Zanthomiza* has been used in the last 50 years, as shown by Christidis & Boles (1994). Therefore *Zanthomiza* Swainson, 1837, is valid and available, and a senior synonym of *Xanthomyza* Strickland, 1841. *Zanthomiza* cannot be suppressed under the principle of reversal of precedence (ICZN 1999: 23.9.1.1, 23.9.1.2) and should be reinstated as the genus-group name. This result may not be an issue in current nomenclature. Driskell & Christidis (2004) reviewed DNA sequence data for the honeyeaters (Meliphagidae) and found that *Zanthomiza* is best placed amongst Australian wattlebirds *Anthochaera* Vigors & Horsfield, 1827.

Bruce & McAllan (1990) noted numerous names that first appeared in popular periodicals published in London in the mid 19th century and antedate their publication in scientific serials. Amongst these were several contentious names where the spelling differed between the accounts or had different application to the current usage. Again, two of these names from Australia have not been treated as valid in the original spelling since 1899, and should be suppressed under the principle of reversal of precedence (ICZN 1999: 23.9.1.1, 23.9.1.2).

- *Pedionomus* Gould, 1840 (31 October) [referring to Mallee Fowl], senior to *Pedionomus* Gould, 1841 (May) [Plains-wanderer]; and
- *Atricha* Gould, 1844 (27 January), senior to *Atrichia* Gould, 1844 (1 March).

Alternatively these names could be considered incorrect subsequent spellings (ICZN 1999: Art. 33). In both cases Gould did not emend the names as he did not refer to the original publication of the names.

One additional name cited by Bruce & McAllan does not fit this category.

***Aplornis* Gould, 1836** (Gould 1836b), vs. *Aplonis* Gould, 1836 (Gould 1836c), the genus-group name for Pacific starlings. As noted by Mathews (1938), *Aplornis* is senior to *Aplonis* by over two weeks. Gould did not refer to the *Aplornis* spelling in subsequent works and thus did not emend the name. *Aplornis* has been used in the 20th century including by Taka-Tsukasa & Yamashina (1931), Mathews (1938, 1945, 1946), Hachisuka *et al.* (1942) and Bruce & McAllan (1990). David & Gosselin (2002) also quoted Bruce & McAllan (1990) for the name's origin and derivation απλοοσ aploos: simple; ορνισ ornis: bird], but used the incorrect spelling *Aplonis*. *Aplornis* is available and valid under the Code and is the senior synonym of *Aplonis* Gould, 1836. As it has been used since 1899, *Aplornis* Gould, 1836, cannot be suppressed under the principle of reversal of precedence (ICZN 1999: 23.9.1.1, 23.9.1.2) and should be reinstated as the genus-group name for the Pacific starlings, with *Aplonis* Gould, 1836, placed in synonymy.

In addition to the names quoted above, there is another example amongst Australian bird names where the first revisor has been incorrectly cited.

***Psilopus albogularis* Gould, 1838**, vs. *Psilopus olivaceus* Gould, 1838, for White-throated Gerygone. Mathews (1920) believed that the first revisor of these names was Stone (1913). However, it was Gould himself in his octavo volume *An introduction to the birds of Australia* (Gould 1848), which was published on or before 29 August 1848. (A copy in the State Library of New South Wales (09: S598.2991/19) is inscribed 'William Rees Esq. with the respects of the Author' in ink, and the date 'Aug^{t}. 29. 1848' in pencil, presumably the date of receipt.) Herein, Gould lists: '*Gerygone albogularis*, Gould .... Vol. II. Pl. 97' and in synonymy immediately below '*Psilopus olivaceus*, Gould in *Proc. Zool. Soc.*, Part V. p. 147, Young.' *Psilopus albogularis* (as *Gerygone albogularis*) was consistently used in the 19th century as the valid name. In the *Emu*, *Gerygone albogularis* was used consistently until 1912 and sporadically to 1924. Thus the principle of reversal of precedence (ICZN 1999: 23.9.1.1, 23.9.1.2) cannot be invoked and *Gerygone albogularis* (Gould, 1838) is an available and valid name for the White-throated Gerygone and *Psilopus olivaceus* Gould, 1838, should be placed in synonymy.

Summary

Of the 18 older names for Australian taxa discussed here, only six can currently be reinstated: *Leucosarcia picata* (Latham, 1801); *Geopelia tranquilla* Gould, 1844; *Hemiphaga novaeseelandiae argetraea* (Forster, 1794); *Zanthomiza* Swainson, 1837; *Aplornis* Gould, 1836; and *Gerygone albogularis* (Gould, 1838). Of these, it is probable that *Zanthomiza* will soon be used only as a subgenus. The status of *Gallicolumba norfolciensis* (Latham, 1801) and *Menura superba* Davies, 1802, are still to be satisfactorily resolved and may be used following further clarification.

Although this note concerns only Australian genus- and species-group names, such issues are widespread in avian nomenclature. For example, Bock (1994) cited numerous family-group names that, for various reasons, he believed should be suppressed by the ICZN. Apparently a 'provisional submission' was sent to the ICZN by Bock but later withdrawn (Olson 1995). Olson noted many problems with Bock's publication including the erection of numerous new family-group names. Bock also considered many apparently older names to be valid, even though their authors had no intention to describe the group as a family in the work cited. Olson suggested that, given the extent of the problems arising from its publication, Bock's work was a candidate for suppression for the purposes of nomenclature. The problems outlined by Olson have yet to be fully addressed.

Nevertheless, the number of name changes due to priority are minuscule compared to the large-scale changes wrought by alterations due to taxonomic treatment. Olson (1987) noted 276 significant name changes between the American Ornithologists' Union's Check-list of 1957 and that of 1983, with only 6% being due to nomenclatural issues of priority and homonymy. Olson noted that even in a well-known avifauna such as North America its names are inherently unstable and likely to remain so. In an Australian sense this is still also true. The number of name changes between the passerine section of the most recent Australian list (Christidis & Boles 1994) and Schodde & Mason's passerine volume (1999) amounts to 34. Advanced drafts of the new species list (Christidis & Boles in prep.) contain at least 29 changes in the passerines between the two editions, several not covered by Schodde & Mason. As noted by Olson, North American ornithologists have learnt to live with an occasional justified nomenclatural change and no doubt Australian ornithologists will do the same.

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The type-localities of six of Sir Andrew Smith's Ploceidae specimens

by H. Dieter Oschadleus

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Sir Andrew Smith lived in South Africa from 1821 to 1837, mainly in Grahamstown and Algoa Bay (i.e. Port Elizabeth), Eastern Cape, and Cape Town, Western Cape (Kirby 1965). A British military doctor, he also collected a great many zoological specimens. Smith's descriptions of these appeared in the *Illustrations of the zoology of South Africa*, published in 1838–49 (Waterhouse 1880, reprinted in Smith 1977), and in earlier publications including the *South African Commercial Advertiser*, *South African Quarterly Journal* and an expedition report, many of which were collated by Salvin (1880). Several volumes of unpublished notes exist in the Transvaal Museum, South African Museum and Government Archives in Cape Town (Kirby 1965). Roberts (1936) published notes of the material in the Transvaal Museum.

Smith included 12 weavers in his *Illustrations* (Table 1), of which six are currently recognised type species (Clancey 1980; Table 2), though several type descriptions were published prior to the *Illustrations*. The ambit of the present paper is limited to investigating the type-localities of these six weavers.

TABLE 1
Synonyms for the weavers included by Smith. For those descriptions in Smith's *Illustrations*, the plate is listed.

Species	**Smith's name**	**Reference**	**Part, Plate**
Red-billed Buffalo-weaver *Bubalornis niger*	*Bubalornis niger*	Smith (1836)	
	Textor erythrorhynchus	Smith (1841a)	13: pl. 64
Scaly-feathered Finch *Sporopipes squamifrons*	*Estrelda squamifrons*	Smith (1836)	
	Amadina squamifrons	Smith (1844)	20: pl. 95
White-browed Sparrow-weaver *Plocepasser mahali*	*Plocepasser Mahali*	Smith (1836)	
	Plocepasser Mahali	Smith (1841b)	13: pl. 65
Sociable Weaver *Philetairus socius*	*Philetairus lepidus*	Smith (1837)	
	Philetairus lepidus	Smith (1838b)	2: pl. 8
Spectacled Weaver *Ploceus ocularis*	*Ploceus ocularis*	Smith (1828)	
	Ploceus ocularis	Smith (1839)	7: pl. 30, fig. 2
Cape Weaver *Ploceus capensis*	*Ploceus capensis*	Smith (1841)	13: pl. 66, fig. 2
Yellow Weaver *Ploceus subaureus*	*Ploceus subaureus*	Smith (1839)	7: pl. 30, fig. 1
	Ploceus aureoflavus	Smith (1839)	
Southern Masked Weaver *Ploceus velatus*	*Ploceus personatus*	Smith (1828)	
	Ploceus Tahatali	Smith (1836)	
	Ploceus mariquensis	Smith (1845)	23: pl. 103
Village Weaver *Ploceus cucullatus*	*Ploceus stictonotus*	Smith (1831)	
	Ploceus spilonotus	Smith (1841c)	13: pl. 66, fig. 1
Red-billed Quelea *Quelea quelea*	*Loxia Lathamii*	Smith (1836)	
Golden Bishop *Euplectes afer*	*Ploceus dubius*	Smith (1836)	
	Euplectes taha	Smith (1836)	
	Euplectes taha	Smith (1838a)	2: pl. 7
Fan-tailed Widow *Euplectes axillaris*	*Vidua* sp.	Smith (1831)	
	Vidua axillaris	Smith (1838c)	4: pl. 17
Thick-billed Weaver *Amblyospiza albifrons*	*Pyrenestes frontalis*	Smith (1840)	12: pl. 61–62

Smith's type-localities are often imprecise because he was more interested in describing ranges than providing formal type-localities. To identify and clarify type-localities, I searched the literature to determine the localities and dates of collection of weavers taken by Smith. The best-documented expedition is that to interior southern Africa, reaching the Tropic of Capricorn in Botswana (hereafter the North Expedition), during which he kept a diary (Kirby 1939, 1940) and a journal (Lye 1975), and subsequently wrote a report including descriptions of new mammals and birds (Smith 1836). His diary provides information on his progress, mapped by Kirby (1940) and Lye (1975), permitting the date and place of collection for *Bubalornis niger*, *Sporopipes squamifrons* and *Plocepasser mahali* to be determined. Three further weaver types are *Ploceus ocularis*, *P. subaureus* and *Euplectes axillaries*, which were collected in the Eastern Cape but accurate dates and localities were not provided by Smith. For these six, the type descriptions as given by Clancey (1980) are presented, with reference to where the types are housed, followed by a discussion of the dates and localities. Types are housed in the

TABLE 2
Localities of Smith's currently recognised weaver type-specimens, with approximate coordinates and dates of collection for each.

Species	Locality	Coordinates	Date
Red-billed Buffalo-weaver	Great Marico River	*c.*25°00'S, 26°23'E	1 Aug 1835
Scaly-feathered Finch	Moshawing River, Kuruman	*c.*26°47'S, 23°20'E	19 Mar 1835
White-browed Sparrow-weaver	Modder River	*c.*29°15'S, 26°43'E	6 Dec 1834
Spectacled Weaver	Grahamstown	*c.*33°19'S, 26°32'E	(1820–28)
Yellow Weaver	Algoa Bay	*c.*33°50'S, 25°50'E	(1820–32)
Fan-tailed Widowbird	Near the Kei River	32°30'S, 28°00'E?	(1820–31)

following museums: The Natural History Museum, Tring (BMNH), National Museums of Scotland, Edinburgh (NMSZ), and National Museums & Galleries on Merseyside, Liverpool (MCML).

RED-BILLED BUFFALO-WEAVER *Bubalornis niger*

Bubalornis niger A. Smith, 1836, *Rep. Expd. Expl. Cent. Afr.*: 52: 'Country about Kurrichaine' =Zeerust, western Transvaal. Specimens: type NMSZ 1843.028.001 (Stenhouse 1930, Herman *et al.* 1990).

In Smith's *Illustrations* he expands on the locality given in the type description (Smith 1836): 'It was not till after we had passed to the northward of the 25th degree of south latitude that we discovered this bird' (Smith 1841a). Sclater (1930) restricted the type-locality to Kurrichaine, a peak 20 km north of Zeerust. Clancey (1964) restricted it to Zeerust, a town that did not exist in Smith's day. Skead (1973: 88, 254) listed both Kurrichaine or Kaditshwene (25°21'S, 26°11'E) and Zeerust (25°33'S, 26°05'E) as the localities for this, and many other, species.

In Smith's diary (Kirby 1940), his first and only reference to the species appears on 1 August 1835. Smith left Tolane (25°19'S, 26°32'E; Skead 1973) on 28 July and followed the Great Marico River to Eerstepoort (24°50'S, 26°27'E), which was reached on 8 August. Smith provides daily travel times, permitting an approximate locality to be calculated for 1 August as *c.*25°00'S, 26°23'E. This buffalo-weaver was not recorded at Zeerust during the atlas (Harrison *et al.* 1997), but was recorded rather frequently along the Marico River from 25°30'S north.

SCALY-FEATHERED FINCH *Sporopipes squamifrons*

Estrelda Squamifrons A. Smith, 1836, *Rep. Expd. Expl. Cent. Afr.*: 49: South Africa, restricted to Kuruman, northern Cape, by Clancey, 1957, *Durban Mus. Novit.* 5: 50. Specimens: syntype BMNH 1872.10.4.92 (Warren & Harrison 1971); syntype ANSP 13911 (Stone 1899); syntypes MCML D1774 and D1774a (Wagstaffe 1978).

The type description records that the species 'Inhabits South Africa' (Smith 1836). In the *Illustrations* Smith lists two localities: 'This bird is frequently found to the northward of Latakoo (=Kuruman) but rarely to the southward; and the only specimens seen from the latter were obtained towards the sources of the Great Fish River' (Smith 1844).

Vincent (1935) restricted the type-locality to Graaff-Reinet district, believing that Smith passed the source of the Great Fish River en route north. Macdonald (1957) suggested it be restricted to Kuruman, because Scaly-feathered Finch is commoner there. Clancey (1957, 1959) disagreed with Vincent because the bird did not occur in Graaff-Reinet. Vincent (1935), however, mentioned the Tandjiesberg (*c*.32°16'S, 25°06'E), the source of the Great Fish River, rather than Graaff-Reinet specifically. The species was not recorded in Graaff-Reinet or Tandjiesberg during the atlas (Harrison *et al.* 1997), but was found around Cradock and in the squares adjacent to the Tandjiesberg.

Smith's diary reveals that the North Expedition, starting from Graaff-Reinet, proceeded directly north to Compassberg, bypassing the Great Fish River (Kirby 1939). He recorded Scaly-feathered Finches twice on this expedition. Firstly, along the Moshawing River (26°47'S, 23°20'E), 80 km north of Kuruman (Kirby 1939), Northern Cape, on 19 March 1835, he found a nest with two chicks; there is no indication whether an adult was obtained. The second sighting was of birds feeding in the Cashan Valley (=west of Magaliesberg, 25°40'S, 27°05'E), North-west province, on 23 June 1835, with additional notes in the entry for 26 June (Kirby 1940). Smith's return journey to Graaff-Reinet was further west than the outbound and again bypassed the Great Fish River.

It seems that Smith did not collect the species near the Great Fish River on his North Expedition. Subsequently, he travelled directly from Graaff-Reinet to Algoa Bay and Cape Town (Kirby 1940, 1965), and did not return to the Eastern Cape again. Smith's specimen from the Eastern Cape must therefore have been collected prior to the North Expedition. Smith travelled widely and collected many specimens in the Eastern Cape in 1820–34 (Kirby 1965). Kirby (1965) does not mention any trips to Cradock or the source of the Great Fish River. Further study of Smith's unpublished notes may provide a precise date and locality for Smith's Eastern Cape Scaly-feathered Finch. His first published description, however, of the species was on the North Expedition and thus the type-locality does not require modification.

WHITE-BROWED SPARROW-WEAVER *Plocepasser mahali*

Plocepasser Mahali A. Smith, 1836, *Rep. Expd. Expl. Cent. Afr.*: 51: 'country between the Orange River and the Tropic', restricted to near the confluence of Modder and Riet rivers, western Orange Free State by Clancey, 1957, *Durban Mus. Novit.* 5: 48. Specimens: syntype BMNH 1845.7.6.132 (Warren & Harrison 1971); syntypes ANSP 14256–57 (Stone 1899).

Smith described *P. mahali* from between the Orange River and the Tropic (Smith 1836) and in the *Illustrations* described the locality as 'upon a tree on one of the tributary streams of the great northern branch of the Orange River' (Smith 1841b).

Smith crossed the Vaal, Modder, Black Modder (=Kaffer Spruit) and the Riet rivers (Smith 1836: 15) on his journey between Thaba Nchu and Philippolis on 4–17

December 1834. From his diary, it is clear that Smith moved east from Thaba Nchu until he reached the Modder River. He stayed here a few days collecting specimens, including the White-browed Sparrow-weaver, then moved south-east to Philippolis (Kirby 1939). Macdonald (1957) correctly restricted the type-locality to the Modder River near Bloemfontein. Clancey (1957, 1959) incorrectly changed this to the confluence of the Modder and Riet rivers (*c*.29°01'S, 24°40'E), because he thought that Smith did not cross the Modder River near Bloemfontein. Clancey quoted Macdonald & Hall (1957) where the correct type-locality was stated without explanation (this was published in Macdonald 1957). Clancey based his supposition on the map in Kirby (1940) where the upper reaches of the Modder River are not shown, but he failed to read the diary.

Smith also recorded this species along the Great Marico River (*c*.24°05'S, 26°55'E), on 10 September 1835 (Kirby 1940), but his first record was on the Modder River, near Thaba Nchu, on 6 December 1834. The correct type-locality is thus the Modder River (29°15'S, 26°43'E), near Thaba Nchu, Free State, South Africa.

SPECTACLED WEAVER *Ploceus ocularis*

Ploceus ocularis A. Smith, 1828, *S. Afr. Comm. Advert.* 3(144): 2: no locality, but = 'eastern districts of the Colony', i.e., eastern Cape. Grahamstown selected as a restricted type-locality by Clancey, 1966, *Durban Mus. Novit.* 7(13): 574. Specimens: syntype BMNH 1845.7.6.26 (Warren & Harrison 1971).

Smith's first weaver description was of Spectacled Weaver (Smith 1828, reprinted in Macdonald & Grant 1953). Smith did not provide a locality, but stated that it was 'Found in similar situations with the foregoing', wherein (*Ploceus personatus* = *P. velatus*) the locality was given as 'Found in the eastern districts of the Colony'. In Smith (1839) he described it as being 'sparingly distributed over South Africa: more especially in the vicinity of the south-east coast'. Clancey (1952) restricted the locality to Durban, KwaZulu-Natal, but Smith visited Durban for the first time only in 1832, four years later. Later, Clancey (1964) corrected this to the Eastern Cape and thereafter (1966) selected Grahamstown, Eastern Cape, as a type-locality because Smith was based there in his early years in South Africa. No adjustment to the type-locality is required.

YELLOW WEAVER *Ploceus subaureus*

Ploceus subaureus A. Smith, 1839, *Illustr. Zool. S. Africa*, Aves, pl. 30 (and text): Algoa Bay, eastern Cape. Specimens: syntype BMNH 1845.7.6.21 (Warren & Harrison 1971).

Smith possessed ten specimens, some he took himself 'all killed in the neighbourhood of Algoa Bay' (Smith 1839). In Smith (1839) he listed an earlier description by him, i.e. '*Ploceus subaureus* Smith. Proceedings of South African Institution, April, 1832'. The South African Institution (precursor to the Royal Society of South Africa) was inaugurated in Cape Town on 17 June 1829 and published the *South African Quarterly Journal* from 1830 (Kirby 1965). The proceedings Smith mentioned are possibly printed versions of talks given at meetings of the institution. These proceedings have not been traced, so Smith (1839) remains the type description, but this reveals that the type was collected pre-1832. Shelley (1887) listed Smith (1832) as 'fide Smith (1839)', indicating that it did not exist even then.

Incidentally, a similar reference is made for Spectacled Weaver, i.e. '*Ploceus ocularis* Smith. Proceedings of South African Institution, Nov. 1828'. The year must be an error for 1829 because the institution was not yet in existence—Smith occasionally recorded incorrect years (Kirby 1965). The type-locality for Yellow Weaver remains 'neighbourhood of Algoa Bay' =Algoa Bay (*c.*33°50'S, 25°50'E), Eastern Cape, South Africa.

FAN-TAILED WIDOWBIRD *Euplectes axillaris*

Vidua axillaris A. Smith, 1838, *Illustr. Zool. S. Africa*, Aves, pl. 17 (and text): 'between seven and eight hundred miles... eastward of Cape Town... in Caffreland' = eastern Cape. Specimens: untraced.

Smith described this species from a specimen 'obtained upon the south-east coast, between seven and eight hundred miles . . . eastward of Cape Town, . . . in Caffreland' (Smith 1838c). Smith actually described it earlier, but did not provide a specific name (*Vidua* sp., Smith 1831: 12), though he did give the locality as near the Kei River (Smith 1831), Eastern Cape, South Africa, and the collection date would have been in 1820–31. Smith crossed the Great Kei River on 18 January on his trip to KwaZulu-Natal in 1832, but clearly he must have collected Fan-tailed Widowbird on an earlier excursion to the Kei. The type-locality can be restricted to Great Kei River, Eastern Cape, South Africa.

Conclusion

Andrew Smith's published, annotated diaries of his North Expedition (Kirby 1939, 1940) provide an excellent resource for type-localities of specimens collected during this trip, as well as dates of collection. Of six weaver type-localities, that of the White-browed Sparrow-weaver must be revised per Vincent's restriction. I provide more detailed localities for Red-billed Buffalo-weaver, Scaly-feathered Finch and Fan-tailed Widowbird. The type localities of Spectacled and Yellow Weavers do not require modification. It is suggested that all of Smith's type-localities be checked.

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New and noteworthy records of birds from south-eastern Nicaragua

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The south-eastern Nicaraguan lowlands, bordering Costa Rica along the río San Juan, constitute one of the more extensive forested areas in Central America and sustain a rich avifauna (Howell 1969). However, for historical and political reasons, Nicaragua's flora and fauna remain poorly studied (Gillespie 2001). Recently, interest in ornithology has slowly increased, but neighbouring Costa Rica is still pre-eminent in terms of research and conservation, and a far more popular tourist destination due to its comparatively well-known avifauna and comprehensive field guide (Stiles & Skutch 1989). In contrast, there are few publications on Nicaraguan ornithological research (Martínez-Sánchez 1990), though the last dozen or so years have seen renewed efforts, including specific studies on Nicaraguan birds conducted by both nationals and foreigners (Cody 2000a,b, Arguedas-Negrini 2001, Wiedenfeld *et al.* 2001, Gillespie 2001, 2002, Woltmann 2004, Kjeldsen 2005; http://www.bio-nica.org/biblioteca/BibliAves.htm). Whilst these have considerably increased our knowledge, there is still a large information gap regarding distributions of Nicaraguan birds (Gillespie 2001) and additional data are needed so that conservation efforts can be directed appropriately. Here we present noteworthy

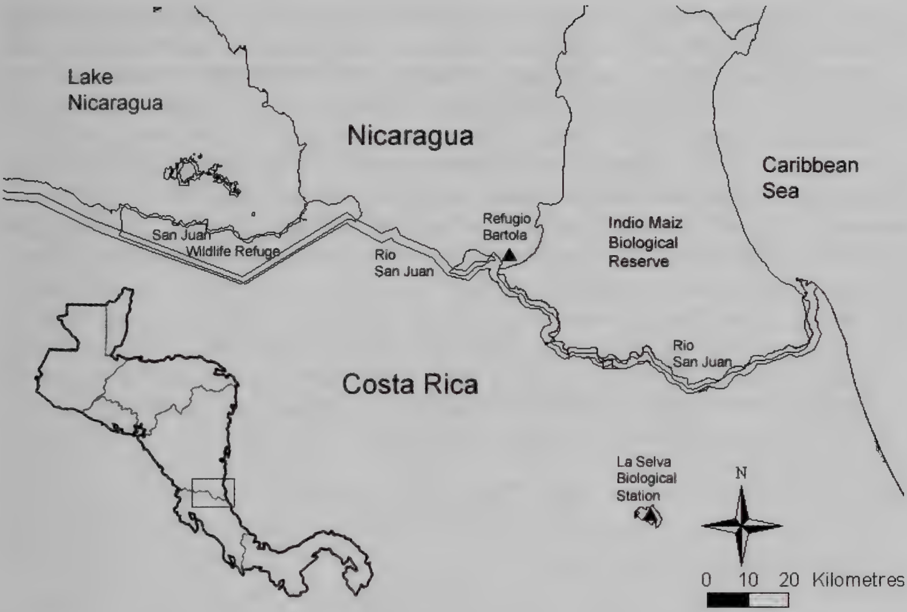

Figure 1. Location of the study site in Nicaragua; note the distance from La Selva Biological Station, Costa Rica.

observations of Nicaraguan birds, including several species previously unrecorded in the country, together with notes on latitudinal and altitudinal range extensions for several others within the country.

Study site

The río San Juan flows from the south-east end of Lake Nicaragua, the largest freshwater body in Central America, and its lower reaches serve as the border between Costa Rica and Nicaragua, until the river reaches the Caribbean. The observations reported here were made at Refugio Bartola, a lodge at the confluence of the ríos Bartola and San Juan (10°57’N, 84°19’W), adjacent to the Indio Maíz Biological Reserve (IMBR) in Nicaragua, with some additional observations at the Río San Juan Wildlife Refuge and from within the IMBR (Fig. 1). Near the confluence of these rivers, elevations are 30–100 m and vegetation is typically evergreen tropical wet forest of the Caribbean lowlands, with an annual precipitation of 4,000–6,000 mm p.a., making it one of the wettest parts of Central America (Campbell & Lamar 1989, Incer 1979 *in* Martínez-Sánchez 1990). The dry season extends from February to April and the greatest precipitation falls in December–January (Cody 2000a). Topography is characterised by somewhat hilly terrain with flatter areas cut by meandering streams through soils composed mainly of red clay. Vegetation is nearly entirely primary forest with minimal human intervention especially in the biological reserve, but in the buffer zone to the west there is an increasing degree of disturbance mainly due to cattle farming along the río San Juan. In pristine forest the canopy reaches 40 m, with some emergents up to 50 m high. Forest composition is similar to that of La Selva Biological Station, Costa Rica, but the dominant tree is *Dipteryx panamensis*, rather than *Pentaclethra macroloba* as at La Selva (Hartshorn & Hammel 1994, Cody 2000a). The margins of the río San Juan mostly consist of swampy areas that vary seasonally in their degree of inundation; our surveys included these river-edge habitats, as well as the rain forest proper. Most observations reported here were made at Refugio Bartola and adjacent parts of IMBR by CMR and RHS (September–November 2005, February–April 2006), MLC (April–May 1994, 1999, 2001 and 2003), BJS (April–May 1999, April and July 2004) and SW (April and July 2004), whilst JPK supplied records from the dry seasons of 2002–05.

Species accounts

AGAMI HERON *Agamia agami*

Observed, by BJS, *c.*5 m up in forest at Refugio Bartola, over a small tributary of the río Bartola, in April 1999. MLC also observed the species in the same area during his visits in 1994 and 1999. *Agamia* is uncommon almost throughout its range and despite having been previously recorded in Nicaragua we consider these reports to be significant.

BARRED HAWK *Leucopternis princeps*

A single was seen, on 15 November 2005, by RHS and CMR, circling high over the Costa Rican side of the río San Juan. It slowly crossed into Nicaragua and finally disappeared from sight over the IMBR, entering the reserve. The species has not previously been recorded north of Costa Rica or lower than 50 m elevation (Ferguson-Lees & Christie 2001). This may have been a vagrant individual.

HARPY EAGLE *Harpia harpyja*

RHS observed one, on 20 September 2005, flying low over the canopy at Refugio Bartola. It was first noticed by its vocalisation then observed gliding *c.*20 m above a leafless tree. A group of Mantled Howler Monkeys *Alouatta palliata*, first seen a few minutes previously, was found perching quietly and motionlessly on thin branches just 4–6 m above ground afterwards. MLC had one observation of this species flying downriver into the Bartola reserve in May 1999. Records in Central America are very patchy and the species appears to be rare throughout almost the entire region (Ferguson-Lees & Christie 2001). It was predicted to be the most extinction-prone bird species in Nicaragua (Gillespie 2001).

CRESTED EAGLE *Morphnus guianensis*

The first records of this rare eagle in southern Nicaragua were made by MLC on 10 May 1994 and 15 May 1999. It had previously been recorded in northern Nicaragua, in the North Atlantic Autonomous Region (Kjeldsen 2005).

OLIVE-BACKED QUAIL-DOVE *Geotrygon veraguensis*

G. veraguensis was first reported in Nicaragua by MLC, on 6 May 1999, in the Refugio Bartola (Cody 2000b). The species was also seen and heard on several occasions by BJS and SW on 26 July 2004. These are the northernmost records of the species.

BLUE-HEADED PARROT *Pionus menstruus*

Observed by MLC, on 10 May 1999, in low trees around the overgrown clearing on the west bank of the río Bartola, 1 km north of the Refugio Bartola headquarters. On 22 April 2006, RHS observed two birds flying from Costa Rica into the IMBR. Although *P. menstruus* is common within its range (from Costa Rica through South America), our observations may suggest an extension of its distribution to the north, perhaps due to deforestation in the Caribbean lowlands of Costa Rica (Sigel *et al.* 2006, Stiles & Skutch 1995).

CENTRAL AMERICAN PYGMY-OWL *Glaucidium griseiceps*

Two birds were first heard, by JPK, on 28 February 2003 in the grounds of Refugio Bartola. Subsequently, the species was frequently heard by BJS and SW in forest at Refugio Bartola adjacent to the IMBR in 2004–05 (a recording has been archived at http://www.xeno-canto.org/). Within the IMBR another was recorded, by JPK, at the village of Cristo Rey in 2004. It has since been recorded also at the río Prinzapolka in the North Atlantic Autonomous Region (Kjeldsen 2005). Though assumed to occur from Mexico to Ecuador (Howell & Webb 1995, König *et al.* 1999), the species has not previously been recorded in Nicaragua.

RUFOUS NIGHTJAR *Caprimulgus rufus*

This species was heard, by MLC, calling from the IMBR on 25 April 1999. Though a common species from Costa Rica through South America, this is apparently the first record north of the usual range and a new country record.

GREAT JACAMAR *Jacamerops aureus*

SW heard this species' unique vocalisations near dawn, in forest at Refugio Bartola, on 25 July 2004, but was unable to tape-record them. Great Jacamar was mentioned for Refugio Bartola by Kjeldsen (2005), reporting an observation made by O. Thorup in March 2003. There are other records, from the río Prinzapolka in the North Atlantic Autonomous Region of Nicaragua, in February 2001 (Kjeldsen 2005), and the Sutawala Valley of Honduras, in March 2004 (http://www.birdinghonduras.com). This uncommon species is of interest due its sparse distribution and sensitivity to disturbance (Stiles & Levey 1994, Tobias *et al.*

2002). Formerly, Costa Rica (where it is very scarce) was thought to represent the northernmost limit of the species (Stiles & Skutch 1995).

PIED PUFFBIRD *Notharchus tectus*
A pair was seen, by JPK, in forest near the village of Bartola, *c.*3 km along the río Bartola from Refugio Bartola, in March 2005. Pied Puffbird occurs in the lowlands of Costa Rica south of the border, where it is thought to be declining (Stiles & Skutch 1995), but has not previously been recorded in Nicaragua. Large areas of the species' preferred habitat exist in south-east Nicaragua.

BROWN-BILLED SCYTHEBILL *Campylorhamphus pusillus*
One was seen in the subcanopy, near a narrow stream adjacent to a forest border, by CMR and RHS, on 10 November 2005. This is the northernmost record of this species, which otherwise ranges from Costa Rica to Ecuador (Ridgely & Tudor 1994).

PLAIN ANTVIREO *Dysithamnus mentalis*
This common member of subcanopy antwren-dominated flocks at Refugio Bartola was previously reported by Cody (2000a) and there are other records from cloud forests in the north of the country (Martínez-Sánchez 2006), but despite this Nicaragua is rarely mentioned within the range of this species (e.g. Zimmer & Isler 2003).

WING-BANDED ANTBIRD *Myrmornis torquata*
Observed at close range, by MLC in May 1994, at Refugio Bartola, *M. torquata* is known only from scattered records throughout its range, with previous records in Nicaragua and Panama, but not Costa Rica (Huber 1932, Ridgely & Tudor 1994, Zimmer & Isler 2003). It is also assumed to occur in eastern Honduras, but this requires verification (Anderson *et al.* 2004). The above observation suggests the species could occur in northern Costa Rica.

WHITE-RINGED FLYCATCHER *Conopias albovittatus*
First recorded at Refugio Bartola by JPK in 2003, and BJS and SW occasionally recorded the species in trees around the buildings of Refugio Bartola in 2004. RHS and CMR twice observed individuals perched in an *Erythrina fusca* beside the river at Refugio Bartola, on 18 September 2005 and 16 March 2006. This species ranges from Honduras to Colombia (Fitzpatrick 2004), but ours appear to be the first published records for Nicaragua.

YELLOW-MARGINED FLYCATCHER *Tolmomyias assimilis*
This noisy and conspicuous species was first observed in Nicaragua on 3 May 1999 when it was identified on the basis of appearance and voice (Cody 2000b). BJS and SW occasionally heard the species while conducting point counts in the forest at Refugio Bartola adjacent to the IMBR in May 2004.

BLACK-CAPPED PYGMY-TYRANT *Myiornis atricapillus*
Twice in March 2005 a small group of these flycatchers was observed, by JPK, close to the village La Bijagua, *c.*5 km north-east of the mouth of the río Bartola. The species was also heard regularly at Bartola, by SW and BJS, who detected several individuals during point counts in 2004, on 5 and 8 April and 24–26 July. These sightings are the first in Nicaragua.

BARE-NECKED UMBRELLABIRD *Cephalopterus glabricollis*
JPK and O. Thorup observed two females / immatures 1.5 km along the río Bartola from the confluence with the San Juan, roosting on the IMBR side of the river, on 26 February 2003. CMR and RHS observed one 350 m upriver as it crossed to the IMBR side, on 12 November 2005. There is another record, from Los Guatuzos Refuge, at the headwaters of the río San Juan, on Lake Nicaragua, in February 1999 (Martínez-Sánchez 2006). Hitherto, Bare-necked Umbrellabird was considered endemic to Costa Rica and Panama. We note also the existence of suitable habitat at the correct elevation for this species within the IMBR and north of the río San Juan within Nicaragua, thus the species may regularly moving downslope to Nicaraguan territory from Costa Rica during the non-breeding season (Chaves-Campos *et al.* 2003).

PURPLE-THROATED FRUITCROW *Querula purpurata*
Frequently heard at Refugio Bartola, by MLC, during 1995 to 2003; BJS and SW observed the species on ten of 60 point counts at Refugio Bartola in July 2004, and it was also seen by MLC in a mixed-species canopy flock that included *Monasa morphoeus* and *Pteroglossus torquatus. Q. purpurata* had been recorded just once previously in Nicaragua (Gillespie 2001) and had hitherto only been considered as resident as far north as Costa Rica (Stiles & Skutch 1995).

VEERY *Catharus fuscescens*
Observed, by MLC, on 15 April 2001 at the Refugio Bartola headquarters, *C. fuscescens* is usually regarded as rare on migration through Central America (Clement & Hathway 2000). For Nicaragua, there are only two previous records, from cloud forests in the north (Martínez-Sánchez 2006).

BLACKPOLL WARBLER *Dendroica striata*
MLC recorded this species on 8 April 2001 and 16 April 2003 at Refugio Bartola. There is also a record from the río Prinzapolka, in the North Atlantic Autonomous Region, in April 2002 (Kjeldsen 2005). *D. striata* is apparently a rather rare spring migrant in Nicaragua, where until now it had not been reported.

WHITE-LINED TANAGER *Tachyphonus rufus*
JPK observed a female in a garden in the town of Boca de Sábalos, foraging with other tanagers at a fruiting tree, on 11 April 2005. It is reportedly extending its range

in Costa Rica due to deforestation (Stiles & Skutch 1989), and this is the first record in Nicaragua.

Additional records of interest

The following records are also considered of interest. **Green Ibis** *Mesembrinibis cayennensis*: though previously mentioned just once in Nicaragua (Wiedenfeld *et al.* 2001), it seems to be fairly common, with several records by SW and BJS (April and July 2004), CMR and RHS (October 2005, February–April 2006) in swampy margins of the río San Juan, at Refugio Bartola and the IMBR; its range extends from Honduras (Anderson *et al.* 2004) to South America (Parker *et al.* 1996). **Semiplumbeous Hawk** *Leucopternis semiplumbea*: observed in 1999 by BJS (23 April) and MLC, with records on 16 November 2005 and 21 February 2006 by RHS; previously recorded elsewhere in Nicaragua, but it appears to be uncommon, though there is suitable habitat in IMBR. **Yellow-winged Tanager** *Thraupis abbas*: common elsewhere in Nicaragua and around the Bartola headquarters, where observed visiting fruiting trees on 11 November 2005 and on 5, 18 and 21 March 2006, by CMR and RHS, always with Palm Tanager *T. palmarum*; Yellow-winged Tanager is assumed to be absent from Costa Rica and southern Nicaragua (www.natureserve.org), but it seems likely that the species occurs in both. **Black-bellied Hummingbird** *Eupherusa nigriventris* and **Masked Yellowthroat** *Geothlypis aequinoctialis*: both species have records needing confirmation or further support. A bird was identified, in 1994, as a Black-bellied Hummingbird by MLC, but this species is known only from the Caribbean slope in Costa Rica and Panama, in mid-elevational forest (Stiles & Skutch 1989). Although there are some unexplored mountains in IMBR of almost 700 m, this species apparently requires even higher elevations. Perhaps it occurs as a vagrant or a seasonal migrant from the Costa Rican breeding grounds. Masked Yellowthroat was recorded by CMR and RHS twice; on 10–11 November 2005, a male and female were observed in marshes bordering the río San Juan, at Refugio Bartola; on 19 February 2006, a male was seen in a pasture adjacent to Refugio Bartola. Common Yellowthroat *G. trichas* is a winter visitor to this region and Olive-crowned Yellowthroat *G. semiflava* a common resident. However, these birds had uniform yellow underparts and the males a conspicuous grey crown and forehead. The northernmost record of the species corresponds to the race *chiriquensis*, from the Chiriquí region of Costa Rica and Panama (Curson *et al.* 1994, Stiles & Skutch 1995), but it may be that deforestation has facilitated an expansion of its range.

Concluding remarks

These records add to the growing body of data on Nicaraguan birds. However, there is a great need for further research, especially using standardised methods and counting techniques, as well as continued collection of specimens, to better assess the Nicaraguan avifauna. Previous attempts to establish a scientific collection of avian specimens in Nicaragua failed due to lack of support from institutions and local universities (J. C. Martínez-Sánchez pers. comm.). Despite the efforts of local and visiting researchers, Nicaraguan birds remain severely understudied, hampering the instigation and execution of conservation strategies. The monitoring of migratory birds at MoSI stations (Monitoreo de Sobrevivencia Invernal) that record overwinter survival of Neotropical migrants is a good example of useful current monitoring efforts, but even this requires additional funding to continue in the río San Juan region (S. Morales pers. comm.). The IMBR and the río San Juan become increasingly important, as other large protected areas in the region, e.g. La Selva Biological Station in Costa Rica, are experiencing species declines and possibly extirpations (Sigel *et al.* 2006). The IMBR represents one of the largest intact tracts of undisturbed lowland forest on the Caribbean slope of Central America, and its preservation is critical to the conservation of the unique and diverse avifauna of the region. For some altitudinal migrants, such as Bare-necked Umbrellabird, reported to move seasonally, from *c.*1,400 m to the lowlands (Chaves-Campos *et al.* 2003), it is important to determine if these migrations occur from Costa Rica to Nicaragua (like Three-wattled Bellbird *Procnias tricarunculatus*: Powell & Bjork 2004), or if these are restricted to within Nicaragua. Gaps in the knowledge of Nicaraguan birds have unfortunately left the country as something of a backwater with respect to conservation and research efforts (Gillespie 2002), a view that we hope will be redressed by renewed research. Though biodiversity does not recognise political borders, we feel justified in drawing attention to the critical conservation role of the IMBR and the río San Juan region in Central American biodiversity.

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Ecology, population and conservation status of the Chocó Vireo *Vireo masteri*, a species new to Ecuador

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Chocó Vireo *Vireo masteri* was only recently described from Pacific premontane pluvial forest of the western Andean slope of Colombia, where it is known from three sites at 1,100–1,600 m: Alto de Pisones, Risaralda, and two in the Junín area, Nariño (Salaman 1994, Salaman & Stiles 1996). These two areas are 520 km apart, but it was postulated that the species is more or less continuously distributed where appropriate habitat remains. However, all searches and playback trials in intervening areas have failed to find the vireo. The population was estimated at 1,000–2,499 individuals and its Extent of Occurrence to be 3,105 km^2, which in combination with its restriction to two areas and suspected declines in Extent of Occurrence, Area of Occupancy, area and extent of habitat, and number of mature individuals, qualified the species as Endangered (BirdLife International 2004, 2006).

It was long suspected that *V. masteri* also occurs in north-west Ecuador (Moore *et al.* 1999; P. Salaman pers. comm.). However, it went unrecorded until 16 September 2004, when BP observed and tape-recorded a pair with a mixed-species flock *c.*3.7 km east of Alto Tambo, Esmeraldas, on the Ibarra–San Lorenzo highway (*c.*00°54'N, 78°30'W; *c.*900 m). The late P. Coopmans subsequently confirmed the identification of the tape-recordings, and P. Salaman checked BP's field description. On 24 August 2005, BP failed to relocate the species at the same site, despite repeated broadcasting of pre-recorded vocalisations. However, on 18 September 2005, following the San Lorenzo–Ibarra railroad above Alto Tambo in a north-east direction, he found another pair of *V. masteri* in a mixed-species flock (*c.*00°55'N, 78°29'W; *c.*800 m).

Between 12 January and 2 March 2006, OJ & PMV observed and tape-recorded *V. masteri* on almost all days of survey work in the Pachamama Valley (00°50'N, 78°32'W; 1,360 m), community of El Cristal, and on the río Negro Chico (00°50'N, 78°33'W; 1,130 m); the latter site is *c.*10 km south-east of Alto Tambo. Both rivers form part of the upper río Negro drainage. Again, P. Coopmans confirmed the identification of the tape-recordings, which will be published in the revised edition of Krabbe & Nilsson (2003). These records extend the known range of Chocó Vireo by *c.*95 km south from the río Ñambí, one of the known localities of this species in Colombia.

Ecology and behaviour

In Ecuador, Chocó Vireo was recorded between 800 m and 1,500 m, in the premontane pluvial forest life zone (*sensu* Holdridge 1967). The highest record was one heard by OJ on 24 February 2006 in the Cordillera de Lachas above the Pachamama Valley (00°51'N, 78°31'W; 1,470 m). It is possible that the species is also present at slightly higher altitudes, as it is known to at least 1,600 m at Alto de Pisones (Salaman & Stiles 1996). Our data suggest that *V. masteri* occurs in a wider altitudinal range than previously reported. We recorded the species also in a broader spectrum of habitats, including primary forest on level ground and steep slopes, and at forest edges bordering pastures, roads and railways. Habitat above Alto Tambo was regrowth of intensively logged forest. Annual precipitation in our study areas might be less than at Colombian sites, with an estimated 4,500–6,000 mm in the upper río Negro drainage vs. 7,200 mm at río Ñambí (Cañadas 1983, Lanfer 1995, Salaman 2001). However, the general forest structure and composition in the río Negro drainage were very similar to those described for Colombia (Salaman & Stiles 1996): very wet cloud forest with abundant palms, epiphytes, moss and ferns, a broken canopy and numerous treefall gaps, due to high rainfall and instability of soils on sloping terrain.

In the upper río Negro drainage, we found Chocó Vireo to be fairly common, with up to four singing birds recorded daily along transect routes of 1,200 m length. Weather and general activity levels of mixed-species flocks largely influenced the species' detectability. As *V. masteri* has smaller territories than many larger flock-attending insectivores (OJ & PMV unpubl.), i.e., ovenbirds, woodcreepers and woodpeckers, it accompanies flocks opportunistically when they move through their territories. However, the presence of flocks of avian insectivores may be a key factor in the selection and quality of their territories, given that Chocó Vireos sang most frequently when accompanying such parties, though only a few song phrases were usually uttered. Prolonged periods of song activity, sometimes lasting *c.*15 minutes or more, were noted when flocks crossed the presumed territory boundaries of the vireo and conspecific intruders were detected by the territory holders. Song phrases were sometimes alternated with nasal chatters, which might function as disturbance notes or alarm-calls, and are reminiscent of those of congeners, i.e., Red-eyed Vireo *V. olivaceus* and Brown-capped Vireo *V. leucophrys*.

In general, *V. masteri* appears to be the only resident *Vireo* present at the known localities, with *Cyclarhis* being the only sympatric member of the Vireonidae (Salaman & Stiles 1996; pers. obs.). However, *V. leucophrys* is definitely present on the upper ridge (*c.*1,700 m) and north-east slope of the Cordillera de Lachas above El Cristal (P. Coopmans pers. comm.; pers. obs.), making it probable that the two come locally into contact.

Foraging birds were usually observed in pairs, most frequently at canopy and subcanopy levels between 15–25 m above ground, but sometimes much lower in treefall gaps and at forest borders; see Salaman & Stiles (1996) for details of foraging strategy.

Population estimates

BirdLife International (2006) gave a precautionary population estimate of 1,000–2,499 individuals, assuming 20% of the Extent of Occurrence may be occupied, and taking a population density of 0.9–3.5 individuals/km^2 (the lowest to lower quartile of ten estimates for six congeners; S. Butchart *in litt.* 2006), yielding 410–1,596 individuals. They suggested the estimate is probably best placed within the range of 1,000–2,499 individuals, because the population is likely to be at the upper end of the banded range as up to five territorial males per transect kilometre were recorded at one site.

Using the 'Multi Time-Window Transect-Mapping' (MTW) protocol for monitoring studies (Jahn in press), an audio-visual survey technique specifically designed to estimate absolute population densities of entire bird communities, we detected 16 territories, corresponding to 3.5 ± 0.3 (range 3.3–4.0) territories per kilometre transect within habitat (*n*=96 samples of four transects; total length 4.8 km, 4.5 km within forest; altitudinal range 1,085–1,370 m; standardised survey effort 46.7 ± 2.9 hours per transect; total effort 204 hours, corresponding to 34 man-days, including six samples repeated due to rain). Absolute population densities can be estimated on the basis of effectively surveyed areas, which in turn can be calculated with the help of species-specific and habitat-specific 'detection threshold distances' (DTDs; *cf.* Jahn in press). In the case of *V. masteri* we estimated a site-specific average DTD of 80 m (range 50–110 m), considering that habitat structure, topography and noisy rivers hindered detection at longer distances. Given that repeated sampling of the same transect increases the probability of detection of additional territories at the periphery of the transect area, we calculated the 'effective DTD' to be 104 m, using an empirical factor of 1.3 (*cf.* Jahn in press). Consequently, the effectively surveyed area within habitat was *c.*100.4 ha for the species (note that, in total, only four semicircles were considered at the transect ends because the transects were organised in pairs of more or less continuous trails of 2,400 m at both study sites). Total population density within forest can thus be calculated as 15.9 ± 1.4 (range 14.7–17.8) territories/km^2, corresponding to 31.8 ± 2.8 mature individuals/km^2. The available area per territory was 6.3 ± 0.5 ha, which might be equal (if occupancy was 100%) or larger than mean territory size (Jahn in press).

We estimate the Chocó Vireo's Extent of Occurrence (*cf.* IUCN 2001) in Ecuador to be *c.*825 km^2 by overlapping the extent of the premontane pluvial forest life zone (*sensu* Cañadas 1983) and the species' presumed altitudinal range (800–1,600 m) with remnant forest cover (Sierra 1999). This area stretches as a narrow band from the Colombian border to the río Barbudo (Cordillera de Toisán) in the south, and covers parts of Carchi and Esmeraldas. Considering that our population density estimates are based on only four transects in the optimal altitudinal range of the species and that it might be much rarer at higher and lower elevations, we calculate the total potential population for Ecuador to be 16,400 ± 1,500 mature individuals (by multiplying half of the Extent of Occurrence by 31.8 ± 2.8 individuals/km^2 and the other half by 0.25 times the optimal value). Repeating the same procedure for the presumed Extent of Occurrence in Colombia (3,105 km^2 *sensu* BirdLife International 2004, 2006), the potential population there would be 61,600 ± 5,500, resulting in 78,000 ± 7,000 mature individuals on the global level. However, this assumes that the species is continuously distributed within its Extent of Occurrence, which might not be the case. Furthermore, existing data suggest that the species can sustain only very low population densities in secondary forest and that it is prone to disappear from severely fragmented habitat mosaics. The true total population size is therefore likely to fall well below the above figure. We therefore assume a 20% occupancy of the Extent of Occurrence (*cf.* BirdLife International 2006), i.e. 165 km^2 for Ecuador and 621 km^2 for Colombia. This gives precautionary population estimates of 3,300 ± 300 mature individuals in Ecuador, 12,300 ± 1,100 in Colombia, and 15,600 ± 1,400 at the global level.

Conservation status in Ecuador

Forest in the Pachamama Valley is very poor in exploitable tree species, making cattle-ranching the only profitable economic activity in this very wet and remote area. Disputes over land ownership are epidemic in Esmeraldas, forcing local people to establish pastures even if they cannot afford to purchase a cow. Our local guides from El Cristal were convinced that all the forest in the valley might be converted within the next few years.

The Fundación Para El Desarrollo Forestal recently purchased the land between the village of Alto Tambo and our base camp west of the río Negro Chico. Thus, it will depend largely on future forestry practices (intensive vs. selective harvesting schemes; natural-forest management vs. plantations of exotic tree species), whether the habitat remains appropriate for Chocó Vireo.

Both study sites are located only a few kilometres north of the Cotacachi-Cayapas Ecological Reserve (243,638 ha; altitudinal range 80–4,900 m), and form part of the enlarged Important Bird Area of the same name (IBA EC037; Freile & Santander 2005). In our estimate, about 50% of the species' Extent of Occurrence in

Ecuador is within the reserve. However, even if *V. masteri* is present there, this would not guarantee the species' survival in the country. Several communities at the periphery of the reserve, including some people of Alto Tambo, are planning to invade large portions of the protected area, with the declared aim to sell the land subsequently to conservation organisations or to receive payments for environmental services. Unless the Ecuadorian government reacts decisively and stops any invasions, the very integrity of the Cotacachi-Cayapas Ecological Reserve might be at stake. The reserve's management plan is currently under revision and we hope that the document will address these (and other) threats and potential solutions.

Some of the presumed Ecuadorian range of Chocó Vireo is within the Awá Ethnographic Reserve (101,000 ha; Esmeraldas, Carchi, Imbabura). However, the latter is not a nature reserve but was established to maintain the traditional culture of the indigenous Awá people. Hence, the area is inhabited and subsistence agriculture, hunting and selective logging are common and legal. It is unclear to what extent conservation of the area's biodiversity is guaranteed.

The altitudinal range (30–650 m) of the Biological Corridor Awacachi (*c.*10,000 ha), which is managed by the SIRUA Foundation, and interconnects the Cotacachi-Cayapas Ecological Reserve and the Awá Ethnographic Reserve, is sited too low to protect any populations of Chocó Vireo.

Reassessment of threat status

Our data suggest that the species' population size is probably too large to trigger criterion C or D1 of the IUCN Red List criteria (IUCN 2001). However, the revised estimate for the Extent of Occurrence (3,932 km^2) is still smaller than the 5,000 km^2 threshold for Endangered (criterion B1), despite the range extension into north-west Ecuador. Furthermore, the species is known only from three separate 'locations,' qualifying for sub-criterion 'a,' and continuing decline is observed, inferred and projected (sub-criterion 'b') in the following: (i) Extent of Occurrence; (ii) Area of Occupancy; (iii) area, extent and quality of habitat; and (iv) number of mature individuals. In conclusion, the species should remain Endangered under criterion B1ab (i,ii,iii,v). At the national scale, the species also qualifies as Endangered in Colombia and Ecuador.

Conclusion

The global population of *V. masteri* might be considerably larger than previous estimates suggested. However, unless additional subpopulations are discovered, its threat status (Endangered) should not be changed. Known populations should be closely monitored as habitat conversion is affecting an increasing portion of the species' restricted range and in order to evaluate the population density estimates presented here. Transect-mapping could also be used to search for the vireo north and south of known localities.

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First record of Verreaux's Eagle *Aquila verreauxii* in Cameroon

by Frank D. Steinheimer & Svenja Sammler

Received 11 July 2006

The genus *Aquila* comprises ten species of which three are African residents and five migrate there in winter. No *Aquila* species except Verreaux's (Black) Eagle *A. verreauxii* has all-black underparts with white wing panels. Verreaux's Eagle occurs from Ethiopia, Somalia and East Africa to Cape Province and along the west coast of Africa from the Cape north to central Angola. Isolated populations occur in Israel, Egypt and on the Arabian Peninsula, and in west Sudan, eastern Chad and the northern Central African Republic (Brown *et al.* 1982).

On 2 April 2006, along the road from Nguti to Bangem near Banyang-Mbo Wildlife Sanctuary, south-west Cameroon (05°20'N, 09°28'E; 234 m), we observed an 'all-black eagle with slightly curved wings and clearly visible white patches on primaries, no visible marks in tail and yellow feet' (our field notes). The bird was discovered flying 50–60 m above ground and 20–30 m above the forest canopy. Subsequently, it circled in midday thermals (29.3°C, 75% humidity, sunshine, no wind), interrupted every 2–3 seconds by short periods of strong wingbeats. Within five minutes the bird had soared to great height and was lost to view. It was identified as an adult *A. verreauxii* immediately and compared with illustrations in Borrow & Demey (2001) during observation. Close attention was paid to the tail, which was slightly wedge-shaped, dark and lacked visible markings. The primaries were basally whitish up to half the length, then barred grey, especially on the inner feathers, and black on the distal third, forming a large pale carpal patch. Furthermore, we noted the unusual curved wing shape caused by the shorter inner primaries compared to the broader outer secondaries. When gliding the tips of primaries curved slightly upwards, and no moult in the wings or tail was evident. The head figured prominently in silhouette compared to other raptors of a similar size. Only the ventral plumage could be seen, hence the white Y-shaped mark on the mantle and uppertail-coverts typical of this species was not observed.

The distribution of Verreaux's Eagle is explicitly linked to drier habitats, preferably with annual rainfall >750 mm and/or montane areas to 5,000 m (Brown *et al.* 1982). Most records are from savannas, sparsely or patchily wooded and open mountain ranges with suitable breeding sites, i.e. rocky cliffs and outcrops (Thiollay 1994), making our record from tropical lowland forest in West Africa remarkable. Misidentification can be ruled out as observation conditions were optimal and the only other Afrotropical raptor with white panels in dark wings known from the region is Long-crested Eagle *Lophaetus occipitalis* which is much smaller and has a black-and-white barred tail. The bird showed no visible signs of captivity such as bands or feather cuts. Furthermore, no captive breeding of the species is known from this region; the nearest zoo holding the species is in South Africa (L. Bosley & B. Huffman *in litt.* July 2006).

Our observation far from any known breeding area suggests a vagrant. Though Verreaux's Eagle is described as not migrating or wandering far (Brown *et al.* 1982), already Gargett (1990) and Thiollay (1994) stated that movements between patches of suitable habitat must occur, including over 'significant' distances. Our record might represent part of a current range extension, as suggested by recent sightings from North and Central Africa: two birds at Tenlaba, Mauritania (Salewski *et al.* 2005), one in Iherir, Algeria (Salewski *et al.* 2005), singles at Dinamou and Hombori, Mali (Lamarche 1980), and a breeding record from the Aïr Mountains, Niger (Newby *et al.* 1987). The surroundings of Banyang-Mbo offer habitats similar to those used by the species elsewhere: inselbergs, rocky hills and montane grasslands.

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